JOURNAL MISSOURI STATE MEDICAL ASSOCIATION

Volume VI APRIL, 1910. Number 10

ORIGINAL ARTICLES

A PLEA FOR AN EARLY AND MORE CAREFUL DIAGNOSIS IN JOINT TUBERCULOSIS IN CHILDREN.

By Archer O'Reilly, M. D., St. Louis, Mo.

By far the most common of the joint diseases of childhood are those of tubercular origin, and of these the most frequent are tuberculosis of the spine, hip and knee.

Up to a short time ago, orthopedic surgery was not given as much prominence as it deserves and as a result the diagnosis and treatment of joint tuberculosis are not as well understood by all as they should be. Because attention has not been sufficiently directed upon the points of differential diagnosis, the case is often wrongly diagnosed and improper treatment, based on this erroneous diagnosis, is given. As a result the patient goes from bad to worse.

In these cases, as a rule, where the diagnosis has been missed, there is marked deformity, usually permanent. The patient suffering greatly and the general condition is deplorable. The histories are all very familiar; the parents are told that the disease is rheumatism and are given some liniment to be rubbed on the leg which will soon make it all right again. The patient is seen only a few times and is allowed to walk on the leg until it becomes so painful that use is impossible, or until marked and permanent deformities have resulted. The parents become discouraged, decide that there must be something more than rheumatism, and go somewhere else. In the meantime irreparable damage has been done. The patient is left a hopeless cripple, often riddled with sinuses. If any relief is possible, it is usually obtainable only by some operation, more or less serious. All his suffering and damage could have been avoided by a proper diagnosis when the case was first seen, and by a

little knowledge of the fundamental principles of treatment. It is to prevent these conditions as far as possible that this plea for an early diagnosis of tubercular joint disease is made.

There are a few points in diagnosis, prognosis and treatment which may help the general practitioner in making an early and correct diagnosis. Only the three most common forms of joint tuberculosis will be dealt with; *i. e.,* tuberculosis of the spine, the hip and the knee. These three forms are the most frequent of the tubercular lesions, and the deformities resulting from the lack of proper care are the most severe and debilitating.

In tuberculosis of the joint the onset is usually gradual, though at times it may be sudden. Fever in localized tuberculosis of the joint is slight or absent. If there is a general tuberculosis, a typical temperature will be obtained. High fever with a localized joint lesion generally points to some other infection, such as osteomyelitis.

The cardinal symptoms of tuberculosis of the joint are: (1) pain; (2) tenderness; (3) muscular spasm and limitation of motion; (4) night cries.

(1) *Pain:* The amount and severity of the pain vary. It is usually an early symptom, but frequently the disease may have reached an advanced stage before the pain becomes marked. Pain is often referred, due to irritation of adjacent nerves. In Pott's disease it may be referred to the head, neck, chest, abdomen or the hip. It may be referred to the back of the abdomen. Pressure over the spine or transverse processes at the site of the disease does not cause pain. In the hip the pain is very frequently referred to the knee, but often pain is located definitely at the hip. It may often be elicited by pressure over the trochanter. In the knee, pain is usually definitely located in the joint.

(2) *Tenderness* is always present and may be elicited by active and passive movements. In the early stages and in milder cases, sensitiveness may be determined only by quick motions, while with slow and gentle manipulations, motion may be possible in all directions without eliciting tenderness.

(3) *Muscular* spasm is an expression of joint sensitiveness. The muscles contract to prevent motion in the joint; motion in the joint causes pain. In the early stages muscular spasm may be very slight and may manifest itself only by a hitch or slightly jerky motion on manipulation of the joint; later this results in limitation of motion, as the disease progresses this limitation becomes mechanical. In the spine, spasm manifests itself by prominence of the spinal muscles, and by rigidity of the back. When the condition is cervical, torticollis results, in which all the muscles are contracted. Spasm in low dorsal and lumbar disease causes a stiff poker or military back, in which the back is held perfectly rigid, causing a typical posture; the back is held straight and the shoulders are thrown back, and if the patient attempts to pick an object from the floor, he does so by bending the knees and hips and lowering the hand to the ground without bending the back. In the hip the motions are

limited in all directions. Abduction and hyperextension are the motions earliest affected. In the knee there is an early stiffness which tends to flexion as a result of spasm.

(4) *Night cries* are common in all tubercular conditions, but are not confined entirely to these lesions. They are the result of muscular relaxation. The patient suddenly wakes from a sound sleep, crying out. Usually little or no pain is felt on awakening. The muscles, as a result of sound sleep, relax, allowing the diseased joint surfaces to rub over each other. This causes intense pain which wakes the patient and causes the outcry. On awakening the muscles contract again and the pain disappears. If night cries return during treatment it is a sign that something is wrong and that the treatment is not having the desired result. Night cries may be present in any condition in which the joint surface is diseased. They are, however, more common in the tuberculous conditions.

Muscular atrophy appears as one of the less early but constant symptoms in tuberculous joint disease. It is due to disuse of the affected limb. There is also some atrophy in the bone. The muscles above and below the diseased joint are affected. Shortening of the affected limb is also present. This shortening appears as a later symptom and is due to bone destruction, also to a certain extent as a result of disuse and malnutrition. It is most marked in hip disease. In the early stages of tuberculosis of the hip and knee there may be lengthening of the affected limb as a result of infiltration into the joint, and more commonly to a stimulation of the epiphysis at the seat of the disease; this later becomes shortening.

The diagnosis of the various joint conditions is made upon the cardinal signs.

In Pott's disease the onset is insidious. Referred pain is an early symptom appearing, even before rigidity, in the head, neck, chest, abdomen or hip, and especially in the epigastric region; this is the "dry stomachache" which children so frequently complain of. A stiffness and awkwardness of gait and posture are noticed; all spinal motions are guarded and there is marked muscular spasm, unguarded motions cause much pain, downward pressure on the head elicits pain, while pressure on the spinous and transverse processes does not. The patient is listless, does not like to play and has a tendency to rest its body weight upon its arms. When this deformity appears the diagnosis is comparatively easy. The kyphos begins as a small prominence of one spinous process, which gradually becomes larger as more vertebræ are involved. The angle of the kyphos in Pott's disease is sharp and is definitely localized. The following conditions must be considered in a differential diagnosis of tuberculosis of the spine:

(a) Congenital torticollis gives a history of the condition from birth. The head is held to one side with a shortening of the sterno-

cleido-mastoid muscle. In this condition there is practically no pain and there is marked facial asymmetry.

(b) In spasm of the neck there is a history of injury with sudden onset and all motions are painful. In muscular wry neck motions which put muscles on the stretch are painful and the onset acute. Pain usually is relieved by heat and gentle massage. In rheumatism of the spine the onset is sudden, movements apt to be painful when active, while passive movements are apt to be without pain.

(c) In cervical caries the onset is slow, there is general muscular spasm, the head is fixed upright or but slightly inclined, or the chin may be poked forward. The pain is severe with all motions. It may be worse toward the latter part of the day. Pressure down on head is painful, while lifting the head relieves pain. The patient is apt to support the chin in the hands thus relieving pressure. If simple nodding motion is possible without pain, it shows the occipito-atloid joint free from disease. If gentle rotation of the head from side to side is painless it shows that atlo-axoid joint is not affected.

(d) A rachitic spine may be mistaken for Pott's disease, but here there are other symptoms of rickets and the kyphos is different. In rickets the kyphos is round, involves the entire spine and tends to disappear wholly, or partially, when the child is in a prone position, while in Pott's disease it is sharp and localized and does not disappear in a prone position. In rickets there may be pain and muscular spasm, but the other rachitic signs confirm the diagnosis. Rickets, also, is apt to occur earlier than Pott's.

(e) Sprain of the back follows some injury and tends to recover more quickly.

(f) After typhoid fever there may be an involvement of one or more vertebræ. Here you have the previous history of typhoid and a spinal attack, coming on during convalescence or immediately after. As a rule there is no bone destruction, though it may occur.

(g) High dorsal Pott's is differentiated from round shoulders by the fact that in round shoulders there is no pain, the kyphos is rounded, and the spine is flexible in the rounded part.

(h) In scoliosis the curve is lateral and the onset is gradual. There is usually very little pain, if any, or muscular spasm; rigidity if any is due to structural change and is accompanied by rotation of the vertebræ. Occasionally there may be a lateral deviation in early cases of Pott's disease, due to a caries of one side of the body of the vertebræ. This deviation is usually a sharp angle and the other signs of tuberculosis are present.

(i) In hysterical spine there is much pain, usually throughout the spine, the skin is hypersensitive to pressure and possibly to heat and cold. On flexion the spine is not apt to be rigid at the sensitive part, and if the attention is diverted the part can probably be freely moved. There is no pain on vertical pressure.

(j) In osteomyelitis of the spine the constitutional disturbance is greater, the transverse and spinous processes are also apt to be involved, the onset is acute and is accompanied by high fever. Tenderness is present at the seat of the disease, suppuration appears early. Marked kyphos is not common.

(k) Malignant growths. Sarcoma of the spine is rare in childhood. Carcinoma is usually secondary. When a kyphos is present it is usually rounded. The other symptoms may closely resemble those of tuberculosis.

(l) Spondylitis deformans is usually in the adult. The onset is slow, the whole spine is usually involved and stiff, due to bony obstruction. If a kyphos is present it is usually in the shoulders and rounded. Other joints, especially those of the fingers, are involved.

(m) In early hip disease the reflex rigidity of the spine may lead to some confusion, but the other signs of hip disease will be present.

(n) In syphilis of the spine the diagnosis is difficult. Other symptoms of syphilis are apt to be present. The response to antisyphilitic treatment helps in the diagnosis. The condition is not common.

The *x*-ray is not a great aid to diagnosis in tubercular conditions of the spine. It is difficult to get a good picture and does not show anything until definite bone destruction has taken place.

In *Hip Disease* the diagnosis is based on limp, which in the early stage is apt to be more marked in the early morning; pain, which is often referred to the knee and which may be very slight or absent; muscular spasm, which is an early and constant symptom; limitation of abduction, outward rotation and hyperextension are early signs. Tenderness may be elicited by pressure over the trochanters. There may also be trochanteric thickening; muscular atrophy, which is an early symptom, shortening of the affected limb and night cries. As a result of muscular spasm and a desire to assume the most comfortable position, the limb is drawn into characteristic positions,—abduction, flexion and eversion. Abduction is an early symptom. Later, as the disease progresses, the leg, as a result of muscular spasm, may be held in a state of rigidity simulating ankylosis. The patient is apt to lie with the sole of the foot of the unaffected leg pressing down on the back of the foot of the diseased leg, thus tending to separate the joint surfaces and relieve pressure. The *x*-ray is of use as it shows any area of the disease in the bone and any roughening of the joint surface. A differential diagnosis must be made between hip disease and the following:

(a) Synovitis of the hip and tuberculosis may be difficult to differentiate. The course of synovitis is shorter, marked thickening is less marked about the joint in the early stages than in tuberculosis of the hip. The *x*-ray would also be of help.

(b) Lumbar Pott's disease may simulate hip disease on account of the referred pain and tenderness due to the proximity of the spinal disease and irritation of the psoas muscle, which also results in limitation

of hyperextension; but here there would be back symptoms. The hip motions would be less limited, especially abduction.

(c) In acute inflammatory conditions the constitutional symptoms are much more marked, the fever is much higher.

(d) Chronic arthritis deformans, onset slow, usually without any history of injury. Usually, in adults, other joints are involved. The *x*-ray shows true osseous proliferation.

(e) Osteomyelitis of the hip. The symptoms are often very similar to hip disease; as a rule the onset is more acute, the swelling is greater and the temperature is higher. The constitutional symptoms are apt to be more severe.

(f) In the early stages of anterior poliomeylitis there may be pain in one hip with immobility, but the other symptoms of hip disease are lacking, and the presence of paralysis soon makes the diagnosis positive.

(g) In congenital dislocation of the hip the presence of the deformity from the beginning of walking, absence of pain and muscular spasm, the fact that the trochanter is above Nelaton's line and the *x*-ray makes the diagnosis easy.

(h) Perinephritic abscess and appendicitis may simulate hip disease on account of irritation of psoas muscle and tenderness. In these the onset is more acute and the constitutional symptoms are greater. Flexion is the only deformity. Extension is resisted, but the other motions are free.

(i) Separation of epiphysis and fracture of the neck of the femur may be distinguished by the history and *x*-ray.

(j) Sarcoma is apt to be difficult of diagnosis. *X*-ray will help. Also the fact that the pain is more apt to be constant in spite of efficient fixation. It is also more common in adults.

(k) Hysterical hip-spasm is more voluntary. Hyperesthesia and other signs of hysteria are apt to be present, the condition also is apt to be intermittent, atrophy and shortening are absent. *X*-ray will be of use.

(l) Scurvy may simulate hip disease, but as a rule the tenderness is general in all joints and the other signs of scurvy are present.

In *Tuberculosis of the Knee* the onset is insidious, with an intermittent lameness, usually accompanied by a slight flexion of the leg; general enlargement of the knee, as a result of bony and synovial thickening, which tends to obliterate the landmarks on the front and sides, giving an elastic sensation on palpation. Occasionally there is also some infusion into the joint. The swelling is described as fusiform. Increased surface temperature is usually present; also stiffness, muscular spasm and tenderness on motion. Very early we find limitation of complete extension and flexion. This limitation is the result of reflex muscular spasm. Atrophy of calf and thigh is also present. Pain may sometimes be absent and when present is located, as a rule, in the knee. The *x*-ray is of value as showing a bone focus and involvement of the joint surface. The dis-

ease starts usually as a focus at the epiphysis and works into the joint. These foci are plainly shown by the *x*-ray. Roughening of the joint surface and bone involvement are not present in ordinary synovitis. Aspiration of the joint and inoculation into a guinea pig will help clear up any doubtful case.

(a) Injuries to the joint may be followed by pain, limp and limitation of motion in severe cases, also by synovitis. As a rule these tend to recover quickly; if they persist, tuberculosis should be suspected. Sluggish cases of synovitis in children should be regarded with suspicion, as they are apt to develop into a tubercular condition.

(b) In periarticular involvement there is capsular thickening, but no bone involvement or enlargement.

(c) In bursitis and periarticular inflammation the swelling is of a different shape. The fluid is not in the joint and there is less muscular spasm and stiffness.

(d) In rheumatism the onset is more acute. The pain is intense and the constitutional symptoms are much more severe, the fever is high; usually other joints are involved. Rheumatism responds to antirheumatic treatment.

(e) The referred pain from hip disease may mislead, but the knee is not swollen, there is no pain on motion or muscular spasm and other symptoms may be found in the hip.

(f) Frequently there is pain in the knee as a result of flat foot. This is usually on the inner side and accompanies weight bearing; here also the other symptoms of knee infection are wanting.

(g) In the chronic rheumatic conditions the onset is slow, several joints are involved, and the swelling is periarticular. *X*-ray makes the diagnosis definite.

(h) Syphilis. The differential diagnosis may be very difficult. The syphilitic joint shows a good deal of capsular thickening. There is usually less muscular spasm and less synovial infiltration. There is also a history of other syphilitic symptoms.

(i) In the acute infectious conditions the onset is acute, the pain severe, swelling marked and the constitutional symptoms more severe.

(j) Sarcoma, beginning in or near the epiphysis of the femur or tibia, may closely simulate tuberculosis. If periosteal, it is usually more localized and the swelling is more irregular than in tuberculosis. Central sarcoma may simulate tuberculosis closely, but in sarcoma the pain is constant and severe in spite of fixation and treatment, and there is no tendency to improvement. The *x*-ray is the only means of an early diagnosis and shows the destruction of the substance of the bone about the tumor to be much greater than that caused by tuberculosis of the joint.

The use of tuberculin in its various forms as a diagnostic agent is valuable only as a negative test. If the reaction is positive it does not necessarily mean that the joint is tuberculous. Tubercular foci are so common that one may be present in some other part of the body. If the

reaction is negative, it, proves, of course, that the joint is not tubercular. In general it must be borne in mind that the tubercular lesions are much the most common of all joint diseases in childhood. If there is any doubt as to a diagnosis, it is safe to assume that it is tubercular.

Of the prognosis in joint tuberculosis, Bradford and Lovett* have the following to say: "The destructive process, which is so prominent a feature of joint tuberculosis, is almost from the first accompanied by a reparative process tending to limit the destruction, protect the surrounding tissues and prevent generalization. The prognosis depends in the individual case upon which of these two processes prevails over the other. The former is favored by insufficient local treatment, bad inheritance, poor general condition, unfavorable surroundings, and in general what may be termed resistance to the tubercular process. The reparative process is favored by the reverse of these conditions. In the majority of all cases of joint tuberculosis, properly treated at a fairly early stage, the outlook is favorable. The prognosis is more favorable in children than in adults." Taylor† says: "The prognosis in tuberculous joint affections is distinctly good under rational treatment, the large majority recover with useful limbs. The untreated and improperly treated cases, however, go from bad to worse, and finally die of acute tuberculosis, tubercular meningitis, sepsis, waxy viscera, exhaustion, or intercurrent diseases, or recover with crippling deformities and impaired constitutions."

The above quotations are given to show that authorities or orthopedic surgery agree that with proper treatment the majority of cases should recover with useful limbs. With our present knowledge of joint tuberculosis and its treatment, there should not occur any of those deformities which formerly were so common as the result of ignorance and improper treatment. But in order that a case may be treated intelligently, the condition must first be diagnosed.

Only a word here is necessary about treatment. Practically all conservative treatment is based on two points: fixation of the diseased joint and prevention of weight bearing.

In Pott's disease fixation is obtained by braces or jackets of plaster of Paris, celluloid or leather. Prevention of weight bearing is obtained by holding the back in a position of hyperextension, thus taking the weight off the diseased bodies of the vertebræ. In the average case, especially with the more ignorant classes, the plaster jacket is probably the most serviceable because when once applied by the physician it cannot be removed or improperly adjusted by the parents. In applying a plaster jacket, the spine and anterior-superior spines of the ilium should be well padded with felt. The jacket should fit well about the pelvis and should be carried up the chest to the sternal notch in order that the proper amount of pressure and hyperextension may be secured.

---

*Bradford and Lovett, Orthopedic Surgery.

†Henry Ling Taylor. Orthopedic Surgery for Practitioners.

In *Hip Disease* fixation may be secured by a splint or by a plaster of Paris spica. In the average case the plaster spica is more serviceable than the splint, for the same reason as in Pott's disease. A spica, to be most efficient, should be applied from below the axilla to the ankle. As the condition improves the spica may be shortened to the knees. Weight bearing is prevented by a high sole on the foot of the sound limb and by the use of crutches. In *tuberculosis of the knee* the treatment is also by splint or plaster bandage. The plaster should be carried from well into the groin to the ankle or may include the foot. Weight bearing is prevented by a high sole. In all cases the diseased joint should be disturbed as little as possible and all needless manipulations should be avoided. The patient should be under constant supervision in order that any tendency to deformity may be observed and prevented. Treatment should be continued until all symptoms have been absent at least six months. Throughout the disease a general hygiene such as is used in the treatment of pulmonary tuberculosis should be followed. If these principles of treatment are constantly borne in mind, a great deal of injury and much deformity may be avoided.

A very good rule to follow in disease of the joints in children is, that if a diagnosis cannot be definitely made and if tuberculosis cannot be absolutely excluded, then the case should be given the benefit of the doubt and treated as tuberculous. None of these conditions will be hurt by this treatment, while failure to immobilize in a tuberculous condition would do great harm. Until a definite diagnosis can be made the case should be most carefully watched.

The object of this paper has been to give one or two points on the symptoms and diagnosis of joint tuberculosis which may be of some help to the general practitioner and which may enable him to recognize this disease at the earliest possible time; for, as the prognosis quoted above shows, it is with an early and proper treatment that the results are most favorable. In order to get early treatment, the diagnosis must be made as soon as possible. It is in the hope of promoting this end that this paper has been written. If such a result can be obtained a great deal of suffering will have been avoided and many needless deformities will have been prevented.

Metropolitan Bldg.

INTESTINAL OBSTRUCTION WITH SPECIAL REFERENCE TO INTESTINAL PARESIS.

By T. E. Potter, M. D., St. Joseph, Mo.

One of the most difficult and unsatisfactory troubles with which modern surgeons have to deal is intestinal obstruction, especially when associated with intestinal paresis. If the obstruction proves to be from stricture, adhesions, volvulus, hernia, tubercular conditions, appendicitis, etc., these conditions, while dangerous within themselves, are not so alarming, and present more favorable aspects than when complicated with paresis.

The serious feature about obstruction from paresis is not, from the simple fact, that the bowels do not move off the fœcal matter and gas, and balloon up so as to crowd upon the heart and lungs, and in this way interfere with the action of the heart and respiration, but it is the retention, too long, in the intestinal tract, of the toxins, which are soon taken into the blood by absorption. When this occurs, the vital centres become disturbed, then exhausted, and the patient dies from toxemia. When these conditions exist, and we find that the pulse is rapid, wirey, and occasionally intermitting, with an accelerated respiration, associated with extreme nervousness or delirium, we know that toxic poisoning is threatening the life of the sick person, and unless we can do something to eliminate the toxins from the blood, or in some way rid the alimentary tract of this poison, so that its absorption will cease, the patient will surely die. If we are fortunate enough to get the bowels to move, which is rarely if ever done at this stage of the trouble, and the kidneys and the skin act well, then by the use of heart stimulants, we may prevent exhaustion and the patient may recover. The great question is: "After we wait a reasonable time, and internal medicine and enemas fail should we do nothing in the way of surgery? If we resort to the knife, what is the thing to do?" I believe surgery is often behind in dealing with such cases and that as a rule, the conscientious surgeon shrinks from the responsibility he has to assume. I realize that it certainly takes great nerve to open the abdomen of a man or woman, who is suffering from paresis of the bowels, caused by a septic peritonitis or volvulus, and make an artificial anus on the right side; or open portions of the bowel, and wash out the intestinal tract in sections, in order to rid them of toxins that are threatening the patient's life. The question in my mind is, ought we not to do this, even if it promises but little, for by following this line of practice, we may save some, even if we lose many.

Two years ago, last Christmas, a boy twelve years old was brought to the Ensworth Hospital suffering with appendicitis and general peritonitis. He had been ill for seven or eight days. He was distended until it seemed that distention had reached the limit. His lips and face were cyanotic, pulse very poor, no bowel movement for two or three days; he was suffering terribly. There was nothing left to do but operate, or stand by and see him die in a few hours. We pursued the former course, gave him but little anæsthetic, made the opening in the abdomen over McBurney's point, and the pus, which gushed out as from a fountain, was in the free peritoneal cavity, or at least we were not able to make out any abscess wall; the pelvis was apparently full of it. The gangrenous appendix was located, without much trouble, and secured the best we could after the usual fashion, but the tissues of the coecum were very friable. After cleaning him out well with dry gauze, and leaving quite an opening in the abdomen, filled with two or three large rubber drainage tubes, he was still distended almost as much as before the operation. We allowed him to rest until the next morning, before making any attempt to move his bowels, although we gave him a pint of salt solution per rectum while under the anæsthetic, and again during the night another pint. The next day we tried to move his bowels with a six ounce glycerin enema with no results. Repeated enemas failed. He still remained cyanotic with a treacherous pulse. There was considerable vomiting during the day, the night, and the following morning. It seemed to me there was nothing but death for the child. I prescribed three grains of calomel, in ½ grain doses, to be given every half hour; whether he retained it all or not, I do not know, as there was occasional vomiting. During the second night his bowels began to move from the calomel, through a fœcal opening made in the coecum. The movements were large and the amount of gas was immense, but no fœcal matter or gas from the rectum. When I saw him the next morning the cyanosis was gone, the pulse better, and there was no distention. At the end of a day or two, some gas and fœcal matter began to pass the rectum, and we allowed the fistula to close in four or five months, gradually, without interference, keeping the parts as clean as possible during this period. He remained for months in the hospital.

This case reported shows that the great danger in paresis and obstruction is the gradual absorption of toxins, which were, in this instance, beyond any doubt, threatening the life of the patient. When the fœcal fistula was formed, and the intestinal canal, through this opening, could free itself of the poisonous gas and fœcal accumulation, decided improvement was at once noticed. This is only one instance out of several, where we had fœcal fistulas form, and immediately afterwards noticed beneficial results. The question of making an enterostomy in paresis and great distention of the bowel, from any cause where there is obstruction, strongly recommends itself to me as being a justifiable procedure. The opening into the abdominal cavity should not be large, a distended loop

brought into the wound, and a veritable artificial anus made. The opening in the abdomen can be made in the median line, or on the right side above Poupart's ligament, or even on the left side.

The performance of an enterostomy will allow the gas and fœcal matter to escape, and often, in a short time, the obstruction gives way and the original infliction is cured; when this takes place, and the bowels begin to move in the natural manner, the opening in the bowel should be closed, or if thought best, allowed to close itself by granulating in around the wound. In making an enterostomy, the opening in the bowel should not be any larger than necessity demands. If the bowels begin to move, a second operation can then be made, if necessary; the wall of the abdomen can be opened sufficiently to explore and find the true seat of the trouble and correct it. To make a large incision into the abdominal cavity, when there is a trouble so grave as to require an enterostomy, is too serious a thing, if a small one will answer.

Bryant's operative surgery, Vol. 2, page 818, edition 1905, says: "The following statistics, compiled by Curtis, bearing on the results of enterostomy in acute intestinal obstruction, emphasizes the importance of the procedure in no uncertain terms. In 62 cases, 46 were relieved, 6 unrelieved, and the outcome not stated in 10; 51.7 per cent. recovered, and in 60 per cent. of the recoveries the fœcal flow resumed the natural channel. According to Curtis, the rate of mortality in abdominal section, in this class of cases, is twenty per cent. greater than that of enterostomy, and the benefit of the former does not compensate for the greater death rate." The same author further states, that an enterostomy may be made under cocain when the patient could not stand, under a general anæsthetic, an abdominal section of sufficient size to correct the cause.

George H. Monks, M. D., of Boston, Mass., has published a paper in the "Annals of Surgery" for June, 1908, in which he recommends in conditions of paresis and peritonitis, flushing the intestinal canal with salt solution through the multiple enterotomy openings. He suggests that the first incision be made up as high as practical, and the other in a loop down further towards the distal end, the number of incisions must be determined at the time by the operator, but in all cases, he should make as few as possible. Each case presents its own requirements. The bowels should be flushed out between the incisions, and as soon as the upper section is cleansed out with the salt solution the upper incision must be closed with a Lembert suture, the parts cleansed well, and then returned. If a second opening is made, do this in the same manner and then close both openings in the bowels, as in the first instance, cleaning the bowels well before returning them. In order to accomplish this properly, the surgeon must introduce his irrigation nozzle in the wound of the gut, so that he knows, if possible that he is throwing the irrigation fluid towards the distal instead of the proximal end of the bowel.

Monks makes the following suggestions as to how a knowledge of

the proximal and distal end can be accurately obtained. We quote him verbatim except where he refers to his cuts.

"A loop of intestine is gently drawn out of the wound by the surgeon; the assistant, grasping the two ends of this loop, holds it suspended vertically from the wound. The surgeon putting his thumb on one side of the loop and his fingers on the other, causes them gently to proceed down the mesentery towards the right side of the spine,—in other words towards the root of the mesentery. If he finds a twise in the mesentery,—a condition easy to detect—he withdraws his hand, and turns the loop of the bowel in such a way that the twist is removed. His thumb and finger are then pushed again down the mesentery, in the same manner as before towards the mesenteric root. If there is then no twist in the mesentery, the surgeon knows that the proximal end of the loop lies at the upper end of the wound, and the distal end of the loop at the lower end of the wound. In this simple manner he learns the real direction of the gut, and, therefore the direction in which the irrigating nozzle should be placed in the bowel. Simple as it is, however, it is hardly likely that one can successfully carry out this procedure on the living subject until one has tried it on the cadaver." Owing to the importance of this subject, and lack of experience on the part of the writer, in making this operation we quote in full the suggestions of Dr. Monks as to his technique. He says:

" 1.—"Make a free opening through the abdominal wall in the median line, the incision reaching from the pubes to, or above, the umbilicus.

2.—Pick up a loop of bowel high up in the wound.

3.—Determine by reference to the root of the mesentery which is really the upper and which the lower end of the loop. This determination is essential, if one wishes to know in which direction the salt solution will flow during the process of flushing.

4.—Make an enterotomy wound in the loop. Allow gas and feces to escape, and insert the tube into that arm of the loop which leads in the direction of the ileocæcal valve: in other words insert the tube pointed downwards into the gut.

5.—Allow warm salt solution gradually to distend a few of the loops below this opening. If nothing more than this is done in the way of washing, it seems to me that the substitution, in the bowel, of warm salt solution in place of the gas and feces that have escaped will presumably help the patient.

6.—If the patient's condition will allow it, pick up the loop which is apparently the lowest of those distended, make a second opening, insert a second tube—this one directed upwards—and allow the wash water to run out through the tube until it becomes clear.

7.—Carefully cleanse and sew up the first enterotomy wound, and return to the abdomen that part of the bowel which has been washed out. In fact as soon as any enterotomy wound is no longer needed it should

be cleansed and sewed up, and the loop of bowel which has been sutured should be returned to the abdominal cavity.

8.—Repeat this procedure as many times, consistent with safety, as may seem necessary, each time isolating and cleansing a segment of intestine lower down.

9.—Finally if the patient's condition will permit further operating, fill the colon with salt solution from the lowest enterotomy opening, and insert a rectal tube to remove any wash water or intestinal contents which may reach the rectum. It is well to insert the rectal tube before attempting to close the abdominal wall, and thus make it easier by removing some of the wash water in the colon, and diminishing its size, to bring together the edges of the wound.

10.—Use great gentleness in all manipulations and carefully avoid contamination of the peritoneum. The method already described of protecting the intestines between two layers of rubber dams bids fair to be of real service.

11.—In the event that peritonitis is also present, the peritoneal cavity should be washed out thoroughly, before flushing the intestinal canal and also after it."

There is another important point that I must call attention to before concluding this paper. Why, in order to re-establish peristalsis, is it so necessary to flush or drain the bowels? Any one who has studied the histology of the small intestine cannot fail to be impressed with the extensive nerve supply and the numerous nerve ganglia lying between the different muscular coats and fibres as well as in the mucosæ. In the wall of the gut there is the plexus of Auerbach and of Meissner with numerous nerve cells. These important nerves and their ganglia, coming immediately in contact with the toxins, are decidedly affected by them before general systemic depression takes place. So it is much better to remove these toxins early, by drainage or flushing, than to wait until the patient is generally exhausted.

EXCISION WITH IMMEDIATE SUTURE OPERATION FOR FISTULA IN ANO; WITH REPORT OF CASES.*

By E. H. Thrailkill, M. D., Kansas City, Mo.

In so far as I have been able to learn, no paper upon this subject has been presented before this Association. This operation was first attempted by Dr. Chassaignac, in 1856. The wound became infected and suppuration followed. No other attempt was made until 1879, when Stephen Smith, of New York, undertook it with success and published his results. It was for some time limited to small direct fistulas, but at present the proctologist considers no fistula too extensive for its employment, except during active suppuration.

Time will not permit here, of a discussion as to the comparative value of the various operations for fistula in ano, but in defense of this procedure permit me to remind you of a popular belief that prevailed prior to 1880, with the laity, supported by about 75 per cent. of the medical profession; viz.: it was maintained that a fistula, once established, should be left to take its course, as it was ladened with pus forming germs (which meant a tuberculous infection), and to close the fistula would lock them up in the system causing consumption and eventually death.

The majority of modern surgeons ridicule this belief, but I wish to say, that, inasmuch as a large percentage of these fistulæ are tubercular in origin, their belief was well founded.

A few words relative to tubercular fistula, will, I think, lend color to their assumption. In this variety nature protects the body against an invasion of the bacilli by establishing a dense wall around these fistulous tracts which can not be penetrated by the bacilli.

Now in doing the simple method of incision, especially where the curette is employed, which partially destroys the wall, the vessels and lymphatics are opened, allowing the bacteria to enter, with subsequent infection of other organs and death. How many of us have seen tuberculosis of the lungs, peritoneum and intestines, rapidly follow this method of procedure.

I am often asked by physicians how I treat tubercular fistula and if I attempt a cure by operative means? I invariably answer in the affirmative, provided the tuberculosis is not too far advanced.

Tuttle, in his most excellent work on diseases of the colon and rec-

*Read in the Surgical Section, Fifty-second Annual Meeting, Missouri State Medical Association, Jefferson City, May, 1909.

tum, says: "If a tubercular fistula must be operated upon by the simple method of incision, it had far better be left to its own course."

This is often a localized tuberculosis and the foci of disease can be as radically removed here as elsewhere. Is not the proctologist as much justified in the removing of tubercular tissue here as the general surgeon is in the removal of tubercular kidney, bone and glands? And, is not the prognosis as favorable?

In further condemnation of other operations, and in defense of the immediate suture, I would say that the after-treatment of the former occupies an indefinite time, with the patient in a semi-invalid condition during this time. And if the sphincters have been divided the fear of incontinence is constantly before you during the healing process.

With the immediate suture method, if done with care and thoroughness, the patient will be allowed to leave the hospital on about the eighth day. If primary union is not obtained the patient is in no worse condition than if other methods had been employed.

After doing a considerable number of the excision with immediate suture operations with very satisfactory results, I desire to give my technique in this operation. To obtain the desired results, more precautions in preparing the patient and more care and thoroughness in the technique and after-treatment are required than in doing other operations for the same trouble.

I administer a purgative twenty-four hours before the time set for the operation, usually giving castor oil. Give an enema the night before, and have the parts shaved and a gauze pad saturated in a solution of 1-2000 of the bichlorid of mercury and placed over the parts until the patient reaches the operating room. By emptying the bowels the day before, I find them in a state of rest at the time of the operation. If not, place a piece of gauze in the rectum to protect the field from being contaminated with fecal discharges. After the patient is anesthetized, he is placed in the lithotomy position or on the affected side.

The pad is removed and the ampulla irrigated with some antiseptic solution. The patient thus prepared, I proceed to stretch the sphincters gently but thoroughly, using care not to contuse the tissues.

An exploration is now made to ascertain the class of fistula with which we have to deal. If a straight, complete fistula, I employ an instrument that I devised, which was illustrated and published in the Journal of the A. M. A., of November 17, 1909, and which has proved, in my hands, to be superior to the straight probe.

After the entire fistulous tract is removed, threaeded upon the probe of the instrument, a further search is made for diverticulæ.

The wound is irrigated with some sterile solution and scrubbed with gauze to remove all loose tissue, and all hemorrhage should be arrested before suturing begins. I now place the finger of the left hand into the rectum back of the fistulous wound and crowd its base as near the surface as possible, thus bringing it within reach of the operator, enabling

him thereby, to place in the deep sutures; these should be plain catgut. The sutures should be tied by an assistant.

I use either the mattress or interrupted suture, much depending on the length of the flap. I first suture the ends of the sphincter muscle, then the subcutaneous tissue is brought together and sutured.

Care should be taken, in bringing the skin together, not to have the needle pass down through the subcutaneous tissue; also avoid making sutures too tight.

The external dressing consists of an oleaginous gauze, held in place with strips of adhesive plaster or a T bandage. The mucous membrane above is now drawn down and stitched to the margin of the anus (using the mattress suture) to prevent the lodgment of fecal crumbs in the newly made wound. If gauze has been placed in the rectum, it should now be removed before the dressing is applied. Morphia should be given hypodermically for the first twenty-four hours, to relieve the pain and control peristalsis.

The bowels should be confined for about a week, during which time the patient should be given animal soups or Armour's soluable beef and soft boiled eggs. No hydrocarbons should be given as they cause a lumpy and tenacious stool.

At the expiration of a week, a large dose of castor oil should be given, followed by an enema when the first desire to defecate is felt.

A daily examination of the wound should be made and a careful record kept of the temperature and pulse, to determine the presence of a beginning infectious process.

If primary union is obtained the patient will leave the hospital on the eighth or tenth day.

If the fistula is tortuous or complicated, a probe-pointed grooved director should be passed into the sinus as far as possible, then with a knife, divide the over-lying tissue down to the sinus wall; then grasp the skin at the sides of the wound with the forceps and proceed to dissect out the sinus wall. Other sinuses are treated in a like manner and the parts sutured, as previously described.

I have selected only three cases to report, which present the most unfavorable outlook as to repair by primary union.

Case No. 1. Mr. G., farmer, age 29, referred to me by Dr. J. D. Griffith, of Kansas City, in 1902. Upon examination I found an opening in the median line about six inches above the posterior commissure of anus. From this opening a sinus passed downward, entering the rectum in a sulcus between the muscles.

Just before entering the rectum, however, there was an offshoot passing around to the anterior commissure, where it entered the rectum. The excision with immediate suture was employed and, to my pleasant surprise, there was primary union with restoration of the sphincter in both places. The patient left the hospital on the twelfth day and has had no return of the trouble.

Case No. 2. Mrs. K., age 27, referred to me by Dr. G. T. Twyman, of Independence. She was frail and anemic; mother and two sisters had died of consumption. I found an opening at the left of forchette with a sinus leading to the side of rectum, where it entered about two inches above the anal margin. I will say that tubercular bacilli were found in her sputum some time before she came under my observation. The excision of the fistula and immediate suture was employed with primary union. She left the hospital on the ninth day, has had no return of the trouble and is enjoying excellent health, having gained 17 pounds in weight.

Case No. 3. Mr. C., a farmer, was referred to me by Dr. J. N. Jackson, Kansas City, January, 1909. I found a pili nitle sinus with the opening about four inches above the posterior commissure of the anus. Leading from this was a fistulous sinus passing downward to the right of the rectum, where it entered about an inch from the anal margin. Leading upward and inward was an offshoot, which ended in an opening mid-way between the scrotum and anus, making it a very deep and extensive fistula.

I did excision with immediate suture and the patient was able to leave the hospital on the twelfth day. I have seen him recently and he has had no symptoms of a return of the old trouble.

520 Commerce Bldg.

DYSTOCIA DUE TO CESAREAN SECTION.*

By George Gellhorn, M. D., St. Louis, Mo.

It these days when surgical tendencies prevail in obstetrics, it behooves us to pay particular attention to certain complications arising either concomitant with, or following after, these modern major operations, which, to some extent, mar their brilliancy. It now appears that, for instance, vaginal Cesarean section is not quite as unmixed a blessing as Duehrssen and his followers would have us believe. As for pubiotomy, the all too enthusiastic advocates of this bone-dividing operation will have to admit that,—even though the immediate danger from hemorrhage may be overcome,— there remains a possibility of lasting disturbance of locomotion. The abdominal Cesarean section being the oldest and most popular major operation in obstetrics, has, of course, the longest black list. There are already some twenty cases on record of rupture of the

*Read before the St. Louis Medical Society, Section on Obstetrics and Diseases of Women, February 22, 1910.

uterine scar during a subsequent pregnancy or labor, and it is fair to assume that many others have not been reported.

Aside from these most dangerous sequels, there are undoubtedly other minor degrees of dystocia resulting from a former Cesarean section which are not sufficiently emphasized in literature, yet are of the greatest practical importance to the obstetrician and general practitioner; and it is for this reason that I wish to report the following case:

Mrs. G., 25 years old, has been married 5 years. She had one miscarriage a few months after the wedding. Her second pregnancy went to term two years ago. At this confinement, the membranes ruptured prematurely. Labor lasted in all 2½ days during which time the attending physician made several unsuccessful attempts at delivery with forceps. Finally, the child was declared dead. The patient was then taken to a hospital, and abdominal Cesarean section was performed from which she promptly recovered.

She first consulted me July 12, 1909, as she was pregnant again. She could not, however, remember the date of her last menstruation, which in all probability had occurred about three months previously. Upon examination, a longitudinal scar reaching from the symphysis to the umbilicus was found. The abdomen was pendulous. The fundus uteri was about two fingers' width below the umbilicus. The pelvic measurements were as follows: Sp. 24½ cm., Cr. 29 cm., Tr. 29½ cm., Conj. ext., 19½. The promontory was not within reach. The cervix was intact. The pelvis seemed roomy, and there was no apparent reason for her former dystocia.

The treatment consisted in the application of an abdominal belt and in the regulation of her diet.

September 22, 1909. Her general condition remained quite satisfactory until yesterday when she complained of cramping pain in the lower abdomen. Her right foot was edematous, and the external genitals were swollen to such a degree that urination became difficult. Examination revealed extensive varicosities in both labia majora. The fundus uteri was now about two fingers' width *above* the umbilicus. The uterus was found more in the left side of the abdomen. The abdominal scar was tense as if a pull was exerted from within.

October 15, 1909. The swelling of the labia has been reduced by a tightly fitting napkin worn between the legs; the edema of the latter has ceased after patient wore elastic stockings. The general condition of the patient is very good. The urine at no time showed pathologic changes.

November 1, 1909. Patient was greatly alarmed by what she considered to be labor pains. The fundus, on inspection, had receded to the niveau of the umbilicus, and the fetus was in left transverse position. In the lower half of the incision, there was a firm adhesion of the uterus with the abdominal scar. The latter was quite immovable and showed a distinct depression at the area of the cohesion. The fundus

uteri was markedly arcuate. The right horn could be pushed upward as far as the lower angle of the costal arch, while the left horn and the middle portion of the uterus were practically immovable. Therefore all attempts at external version were futile, although the fetus was freely movable and readily followed the manipulations as far as the limited expansibility of the uterus would permit.

All that could be done was to change the transverse into an oblique position, and a tight bandage was applied to the abdomen to perpetuate this position and, thereby, if possible, to stretch or break the adhesions between uterus and scar.

It became, however, evident, within the next few days, that the fetus would resume its transverse position in spite of all precautions, and that the fixation of the uterus had become permanent.

In view of these serious complications and the grave danger to which they might give rise, viz: rupture of the uterus either before or during labor,—the plan adopted was to deliver the patient in a hospital shortly before the probable date of natural labor. Delivery was to consist of hydrostatic dilatation followed immediately by version and extraction. In case of failure, or of rupture, Cesarean section in connection with Porro's operation was to be done at once.

The determination of the proper moment for intervention offered some difficulties. The patient had forgotten the date of her last menstruation, nor could she state the time of the first fetal movements. The position of the fundus gave no information; the height of the fundus had even been depressed by two fingers' width and corresponded now to the niveau of the umbilicus. Any valuable information could be obtained only from the child, which was very plainly palpable and seemed to lie almost directly beneath the abdominal walls. Following the method of Ahlfeld, the child's natural curve was artificially intensified by an assistant who, with his hands upon the head and the buttocks approximated these two extremities as much as possible. Then the distance between occiput and buttocks was obtained by a pelvimeter and the distance thus found was doubled. The length of the child, thus obtained, was 48 cm.

The pregnancy, then, had proceeded to within two weeks of full term, and the 27th of November, 1909, about one week later, was set for the delivery.

A few hours, however, before the appointed date, the first labor pains occurred. The cervix was long and completely closed. Now and then slight contractions of the uterus could be observed, during which the abdominal scar was seen to cave inward as if it stood under considerable pull from within.

Delivery took place in strict accordance with the program previously decided upon. Dilatation of the cervix was done, first with Hegar's dilators, then a small Vorhees bag was pulled through the cervix until the smallest of the three sizes of Pomeroy's bags could be inserted. Dilatation then was continued with the last named bags and was completed

within sixty-five minutes. Version and extraction of a living girl, weighing six pounds, and measuring 48 cm. in length, was accomplished without difficulty. There was no tear either of the cervix or the perineum.

The uterus contracted fairly well. The placenta could not be expressed and had to be loosened manually. It was then found that there was a ridge upon the inside of the anterior wall of the uterus, and that a small portion of the placenta was adherent to this ridge.

The further course is without interest. The puerperium was normal in every respect. The patient still nurses her child and enjoys the best of health. Owing to the inclement weather, I have not seen her in my office and cannot state the condition of the uterus at the present moment.

The questions worthy of consideration in connection with the case reported are these:

1. The text-books teach us that Cesarean section is contraindicated after repeated attempts at delivery with forceps have been made.
2. Dead child contraindicates Cesarean section.
3. Does the remarkable outcome in this case justify in any way a departure from accepted teaching?
4. Cesarean section may, by complications such as those enumerated in the foregoing case, cause grave danger to mother and child in a subsequent pregnancy, and should, therefore, be limited to very strict indications.
5. A pregnant woman who has previously been subjected to Cesarean section, requires careful watching throughout gestation.
6. The use of hydrostatic bags is of great advantage.
7. The model devised by Pomeroy deserves particular attention on the part of the profession.
8. Delivery after a Cesarean section should be undertaken only in a hospital, and all preparations should be made to perform a laparotomy if delivery *per vias naturales* proves impossible.

HUMAN TUBERCULOSIS CONSIDERED FROM SEVERAL VIEWPOINTS.*

By George Homan, M. D., St. Louis.

Tuberculosis in its most common form of manifestation, which is pulmonary consumption, is such a nearly universal infection, is so fully known to mankind in almost every climate and human condition, that its literature alone has reached proportions far beyond the reasonable ability of any one person to read or adequately digest; but, nevertheless, a sketch will be attempted concerning some of the principal points of view from which it has been considered.

Probably the aspects that have received the widest attention and study may be grouped under four headings, namely, Sanitation, Statistics, Sentiment, and Statesmanship, and these main topics will be dealt with, rather briefly it is true, not only in their relation to the disease named, but also in their relation to each other.

Sanitation: In the public health language of to-day this word, in the strictest sense, means prevention—that is a watchful, unsparing, resolute, intelligent detection and destruction of every agent given off, directly or indirectly, from the body of a sick person that can cause disease in another. In the case of tuberculosis this applies chiefly to the spittings of consumptives, and inasmuch as this malady is ordinarily of chronic duration this task of vigilant watchfulness must be maintained by physician, nurse, friends, health officer, and the patient through months certainly and, possibly, years of time.

As has just been stated, such sanitation must be the joint outcome of the efforts of all these parties in order that it shall be most effective for public protection. Under a law that would require notification, by the attending physician or affected family, to the local health officials of the presence of a case of disease appropriate regulations would be applied, and which would call for the sincere coöperation of the parties in interest, alike for the defence of the pubilc against harmful influences proceeding from the sick room, and also for the protection of the convalescing patient against reinfection of himself or herself by undestroyed germs in the expectorated matter or other discharges.

*Delivered before the Medical Society of City Hospital Alumni, December 2, 1909, St. Louis.

Note.—This address was intended for the annual convention of the State Board of Charities and Correction, held at Farmington, Mo., last November. As the contemplated audience would be composed of the general public, all technical medical terms were purposely avoided, the sociology and economics of tuberculosis being emphasized, rather than pathology, diagnosis, etc. Circumstances prevented its delivery as intended.

In order to secure legislation adequate to cope with such dangers, and to secure its enforcement, the teaching of the public is a work of necessity, and this is usually begun by the pioneer efforts of medical men who point out the risks of promiscuous spitting, poor ventilation, and the like; and, ordinarily, such instruction is supported and supplemented by ministers, teachers, and other leaders until a state of public opinion is reached which will demand that nothing in reason shall be left undone to protect the people against either home-grown or imported infection.

Thus when a clear perception of the danger with regard to any certain disease is reached the way is opened for ready acquiescence in measures of sanitation aimed at other disease-breeding agents and conditions; as, for example, those that foster typhoid fever, malaria, dysentery and the like, the sum-total of such coöperative work developing a distinct stiffening and toning-up of a community's moral and physical fibre, betokening an actually heightened power of resistance toward disease in general, together with a courage and self-reliance growing out of sound knowledge and right understanding of dangers to be faced, and the measures to be employed for their defeat.

This would mean that science, skill and sense would leave no room for demoralization, fear, or panic and that pestilential threatenings would be met with the same cool, firm judgment that should distinguish trained, orderly minds when other forms of calamity and peril are confronted.

Thus, then, the word sanitation epitomizes and is the expressed measure of all the forces and influences—moral, intellectual and physical—that can be summoned forth by the power of man to make war on disease; and to prove that public education is a prime factor in this question it is only necessary to point to the fact that however perfect a sanitary law may be it will nevertheless stand a dead letter unless the live wit and perception of the people comprehend its purposes, and demand its strict impartial enforcement against given conditions unfavorable to health.

When called before a tribunal fitted to judge in such matters, and the reason for its being is demanded, Sanitation can stand upright and with calmness and confidence make this answer: "I know the causes and conditions from which come tuberculosis, cholera, rabies, malaria, yellow fever, hookworm disease, meningeal fever, sleeping sickness, diphtheria, bubonic plague, leprosy, and still others. Give to me, therefore, the law and the money and I will strangle outbreaks of these diseases in their cradle."

On a medal struck by the English people to commemorate their deliverance from the Spanish Armada, and all that it meant, is this simple but striking legend: "His winds blew and they were not." So with respect to foes of our own, coming from former Spanish dominions, it may be said, "His work was done and they are not" to mark the conquest by our medical fellow countrymen of yellow fever and malaria in Cuba and Panama.

Statistics: In no way other than by carefully gathered and kept records of births, sickness and deaths, with the causes of the latter and other pertinent data made plain, can any State or community take account of its vital resources and liabilities, and learn the truth that is of fundamental importance to its own existence and well-being; and, sad to say, until this year there were no means in Missouri by which, as a State, such an accounting could be had. It was only possible to learn such facts with respect to certain localities, namely, the larger cities, which by local ordinance require the reporting and recording of vital, morbidity, and mortality figures, thus affording a datum-line from which statistical measurements and conclusions respecting population health, fecundity, sanity, longevity, etc., could be computed.

But, from the local data thus gathered taken in connection with Federal census figures, and vital statistics collected under State laws elsewhere, and in which conditions of population are substantially the same as in Missouri, it is possible to approximate the truth with respect to our own State, and make estimates in cold figures of our losses year by year from tuberculosis.

And let it be said here that the delinquency on the part of a State which fails strictly to require the recording of every birth and death tells against the intelligence and good name of its government. To illustrate, in the cold-blooded calculations of life insurance actuaries such an omission weighs heavily, as where the full truth with respect to health conditions is not officially discoverable the doubt is resolved against the commonwealth, and higher rates are assessed and must be paid accordingly.

Let a glance, therefore, be taken at the estimates of losses from the single cause mentioned, and which are deduced from sources just referred to as affording the only safe data for the purpose. Such a story may be to many persons like a thrice-told tale but its constant iteration, told in passionless facts and figures, seems necessary to make an impression on that variety of the mathematical human mind called business intelligence, and which scorns anything so soft as sentiment.

For example, it is known that in St. Louis more than one thousand persons die every year from tuberculosis, most of them being under middle age and in the prime of their productive usefulness to themselves and the public; and further, that for everyone thus dead there are no fewer than five persons sick with that disease and tending toward the same destination. This local ratio of disease and death, when extended properly and proportionately to the whole population of Missouri shows an annual death list of upwards of five thousand, with probably five times that many persons similarly diseased.

Your own pencils will show, if you are statistically inclined, that the dead bodies thus annually produced, if laid side by side, would extend nearly one and one-half miles—a causeway of death corduroyed by human corpses at a net cost or economic loss to the State, under its own valuation of a human life, of more than twenty million dollars.

Not to speak either of the heartlessness or stupidity of such a showing, when the test of widest medical experience has proved it to be both needless and improvident, would it not be a good business stroke for the State to enact laws and furnish funds providing for a searching survey of its own vital and sanitary situation, to the end that it may accurately measure its own danger, destroy the conditions that favor such vital and economic waste, and let the world know the facts concerning its own hygienic housekeeping?

Is it not a stinging indictment of a hollow civilization and doubtful Christianity that millions on millions of public money are poured out by this nation because of the fantastic conjurings of a mad militarism, when but a tithe of such profligate squanderings would save so many thousands of lives, and give physical happiness to so very many thousands more! Think what answer could be made to the question, asked perhaps by some visitor from another world curious to know something of our manners and ways: "And is this the best wisdom that the human race can show?"

Sentiment: As before suggested many self-wise persons are unwilling to take account of sentiment, declaring that it can have no proper place in every-day affairs, being oblivious to the fact of its power over human minds to an extent which justifies the saying that he who writes the songs of the people need have no care who makes their laws. Every sentiment that grows out of human thought or temperament must acknowledge some relationship to this serious subject.

The poet's apostrophe to death denotes this:

> "Come in Consumption's ghastly form * * *
> And thou art terrible; the tear,
> The groan, the knell, the pall, the bier,
> And all we know, or dream, or fear"

are more or less bound up in the story of this infection, and its ravages amongst mankind.

Pathos and tragedy have unfailingly attended the prolonged march of successive generations of consumptives to the grave. Good and bad, high and low, bond and free, Dives and Lazarus, have alike been constrained by man-made conditions to join this procession, and no other than a flickering gleam has lighted the sombre picture until within the present generation, but now the sun is risen and it has been convincingly shown that there is reason for the assured hopefulness with respect to those thus diseased; that the sentiments of dread and despair once almost universally felt are without good grounds provided the teachings of sane judgment and sound reason are heeded.

Sentiment aside, the fact is that as man has sown so has he reaped, in this as well as other respects, the punishment often reaching to later generations, for only in this way, perhaps, can the blind and selfish greed of man be brought to a proper sense of his offending against the laws

of nature respecting health—his Frankenstein has turned upon him to destroy.

To rob one's brother of his rightful share of earth, air, light, and heaven, is to invite self-destruction through the evil conditions to which that brother is thus reduced; for, as oppressor and oppressed must needs breathe a common air, so an even-handed justice ordains that an atmosphere charged with floating infection may prove more deadly to Dives and his friends than to Lazarus and his like—who may, perchance, through hazardous experience have gained a degree of immunity thereto.

Statesmanship: Last but not least come all of those organized civic forces of the State whose appointed aim is the public service and general welfare—those in whose hands lie the taxing power and the spending of public funds.

Statesmanship is defined as the quality of being skilled in the art of government, comprising those who have broad sagacious views and distinguished ability in dealing with questions arising in public affairs—in short, the art or skill of a Statesman.

It has been said that he who causes two blades of grass to grow where only one grew before is a public benefactor, and this is an economic truth simply stated, for that particular form of subsistence is doubled—which means two heads of wheat, two loaves of bread, two dollars instead of one—briefly so much added wealth and comfort to the world, and statesmanship recognizes the obligation thus conferred.

But how about him who causes two human lives to develop in health and vigor where but one survived before! Has statesmanship recognized in any tangible manner in these days the economic gain and public value of such an achievement? If those thus subject to sacrifice were chattels under the law, as was the case here fifty years ago, there can be no doubt as to the answer made; but, unhappily, now the reply must be No, for human life has been, and is yet, held so cheaply in a general sense that little more than conventional regret is expressed over the wastage by preventable disease of those in their prime, and whose expectation of life reasonably should not be below the Scriptural limit.

Usually it is only when the grief of a personal loss is felt that concern is expressed by the man of affairs, who before knew little and cared less, respecting the conditions that give headway to tuberculosis.

The experience of an active health official in a neighboring State will illustrate this point. He was trying to raise funds to make a fight against consumption and called on a rich man, a business and social leader in his own city. After some explanation he was given a small contribution for that purpose. Three years later this man called on the official and reminded him of the former meeting, saying among other things that he had given the money to get rid of him as he had an engagement, and added: "My daughter is dead of tuberculosis. I understand the subject now. I want to contribute. Furthermore I regret that the infirmities of age make it impossible for me to give my services."

An incident such as this is not uncommon—men of business judgment, prudence, and foresight are dead as it were to the danger of attacks by a subtle foe, the hour or place of which can never be certainly known. You or I, you and I, here or elsewhere, may be the next to yield to this insidious power, so that here is a field, indeed, for the statesman's skill involving no abstract considerations that concern a few only but a thing that may come near to or touch sooner or later the purse, the health, the life of every person in the State.

To summarize: What is a fair conclusion of this whole matter?

If the case has been clearly and honestly stated the answer is plainly this:

(1) That in thoroughgoing *Sanitation*, rightly supported and directed, is to be found the weapons and resources with which a now pandemic infection may be met and overthrown.

(2) That *Statistics*, properly collected and kept, afford the only true measure of health or disease in a given body of people, and constitute an index showing where sanitation is needed, and how it should be applied.

(3) That *Sentiment*, the sense of loss or fear of loss in the individual and public, is often the compelling cause or force that moves a heedless or ignorant people to better things in public health affairs.

(4) That *Statesmanship*, rightly directed, possesses the promise and power of fundamental changes in economic directions through legislation, and in the supplying of funds for overcoming disease. These possibilities are now only dimly seen but when realized in public policy and law will foreshow the virtual extinction of tuberculosis, as a population infection, and which now looms as the appointed destroyer of a notable percentage of the civilized world's human inhabitants.

THE STATE LABORATORY AS A SAFEGUARD TO THE PUBLIC HEALTH.*

By GUTHRIE McCONNELL, M. D., St. Louis, Mo.

Until comparatively recent years the field of medicine had not reached the point where it was impossible, on account of its magnitude, for one man thoroughly to know the subject. Physicians in the past were well acquainted not only with their profession but were well versed also in many of the allied subjects, such as zoölogy, botany, chemistry, etc. This condition has, however, greatly changed as a result of the never ceasing work of investigation that is going on the world over.

*Read in the Medical Section, Fifty-second Annual Meeting, Missouri State Medical Association, Jefferson City, May, 1903.

As the extent of medical information increased it became necessary for the physician to direct his efforts along a narrower field and to omit to a large degree the collateral branches. The science of medicine continued to grow until one man could no longer deal authoritatively with all its manifestations. Consequently the era of specialists came, men devoting their time to one or several branches of the art, principally as surgeons or internists. Finally these were again split up into numerous subdivisions, as occulists, dermatologists, and a dozen others.

Up to this time the laboratory worker had been a clinician who incidentally did what he could along the line of research, but the men who devoted their time to this subject could be easily counted. As pathology, physiology and chemistry revealed new fields in consequence of the aggregate studies throughout the world, a new class of men took an important position. They were those who devoted their entire time to research work, it being soon discovered that one individual could not be an active clinician and at the same time devote his attentions to his laboratory, research being a jealous mistress.

The general practitioners who graduated twenty years ago or more, did not have laboratory facilities for the simple reason that in those days there was little work of that sort in existence. The successful physician was the one who by his large clinical experience and accurate observation was best able to make correct diagnoses and to treat successfully his patients. The clinical thermometer in the earlier days was unknown and the severity of the fever had to be estimated from the sensations given to the investigating hand.

As time went on various laboratory methods were passed on to the clinician. The schools increased their facilities for training as the knowledge of such procedures became more and more extensive. This meant that clinical instruction was being broadened by the introduction of methods, not so much to supplant the older style of teaching as to aid it.

For a long time this new idol was bowed down to by the majority and many sins were committed in its name. The older men, who had acquired their skill from long association with the sick, saw themselves being thrust down by the recent graduate who thought that, because he had seen tubercle bacilli through a microscope, he was a true scientist. In many instances the new comer was, however, able to prove his superiority along definite paths and the clinical experience was relegated to the background in the face of modern laboratory methods. The man with the laboratory training reigned supreme for some time but he was found to be not omniscient. He would send out reports from his laboratory and in the course of time they would be proved to be incorrect. It was not the result of deficiencies in the methods but in the men who had not had the experience required in order that proper deductions and correct conclusions could be drawn.

As conditions now are there is a much saner and safer balance between the clinician and the laboratory worker. The latter is no longer so

sure of his findings, and the former is now better able properly to value the reports given him. The necessity is now appreciated of the great importance of correlating the clinical manifestations with the results of the laboratory investigations. The man working with the test tube and the microscope has realized the value of having on review as many clinical data as possible. He no longer gives an off-hand report, feeling that nothing further can be said on the subject. If he is wise he will recognize times when his proper course will be to say that he does not know; he will no longer make diagnoses and outline treatment after making a laboratory examination. It is this tendency toward making a diagnosis that has led, to some extent, to a feeling of mistrust being manifested by the clinician. The fault however does not lie entirely with the laboratory worker. He is frequently given a specimen for examination and expected to report upon it without having the advantage of any clinical findings. When they are asked for he is not infrequently rebuffed and told that the specimen was sent for him to diagnose. In consequence men have greatly exceeded their duties and have attempted to diagnose the case and even to prescribe a method of treatment. Such a course is often very foolish and one liable to cause trouble. The laboratory man should realize that the most he should do is to make a plain statement of facts. He should say that the tissue is carcinomatous, that the urine contains sugar, that the hemaglobin is diminished. He should not say that an operation in the first instance is the only treatment, that the patient has diabetes because sugar is present in the urine, or that the individual is suffering from a secondary anemia. He might be right in each case, but again he might be wrong on all three counts.

It is the duty of the practicing physician, on the other hand, to train himself so that he can put the proper interpretation upon the findings of the laboratory. If the case proves to be cancer, then let him follow out the course of treatment that is proper for his patient; if the clinical symptoms point to diabetes, then the finding of sugar in the urine will determine the diagnosis.

It is here that the clinician and the laboratory expert should come in closer relationship. If the man of science is also one who has had a large clinical experience, he will be able to gather much information by either seeing the patient or by talking over the case with the attending physician. At the same time the physician acquires a better understanding of the limitations of the laboratory. Although neither one can become equally expert in both branches yet they both can appreciate the value of the work done by the other. From a practical standpoint the busy practitioner can gain more by the employment of laboratory methods than can the research worker by giving time to clinical investigations, although a large part of experimental medicine is based upon the study of diseased persons.

The point that seems the most important at present is the stimulation of a proper use of laboratory methods by those who have not had the

training necessary, or who, on account of active practice, have not the time to employ methods well known to them. The up-to-date physician finds that there are many ways in which the laboratory can assist him. To enumerate all of them would take pages, yet there are some that possibly stand foremost, particularly in regard to the health of the community. Given a case of continued fever the question arises as to whether or not it is typhoid. A drop of blood sent to the laboratory may be the means of determining the diagnosis. The examination of an exudate from the throat may frequently be the cause of preventing an epidemic of diphtheria. The finding of tubercle bacilli in the sputum enables the physician to take the proper precautions toward the protection of other members of the household as well as the community at large. In addition to these may be mentioned the examination of blood for the malarial organism, of urine for sugar or albumin. The presence of intestinal parasites, of bacteria in various lesions, may be disclosed by laboratory methods and the proper diagnosis made. Examinations of gastric contents, of specimens of milk and of water, all of these can be done with comparative ease in the laboratory. The determination of the nature of a tumor will frequently decide the course of treatment, whether or not the patient shall be subjected to an extensive operation. In all these methods there must however be one point emphasized greatly and that is that they are of main value only when positive in character. Not finding tubercle bacilli in a single specimen of sputum does not necessarily indicate a lack of infection. The patient may not have sent proper material or it may not have been obtained under suitable conditions. The absence of the malarial plasmodium may mean that the blood was not procured at the best time. A physician would not be justified in saying that a sore on the genitalia was not a chancre on account of his inability to find the treponema pallidum. The lack of agglutination of a culture of typhoid bacilli by the serum from a patient would not be sufficient to throw out the diagnosis of typhoid fever.

The clinician in the absence of positive laboratory findings should have the courage to make his diagnosis from what he can observe at the bedside. The negative laboratory report should frequently be considered in the light of the lack of a symptom. On the other hand a positive result will frequently be sufficient to overthrow all of the clinical signs. The examination of the blood may show conclusively that the case is one of malaria and not typhoid, a tumor thought benign may prove malignant, and so on.

Although the value of laboratory examinations may be thoroughly appreciated yet there may be, and frequently are, very satisfactory reasons for not employing them. In the first place there is the necessity of having proper laboratory equipment. Such an outfit, even in its simplest form, is expensive and not many men, excepting in the larger cities, have a practice that justifies the expenditure. In addition to the laboratory it is essential that there shall be some one in charge who has had an ade-

quate training. The usual practitioner has not had the proper instruction and consequently when he does make some examination he does not feel sufficiently sure of himself to put much reliance upon his results.

In many small communities there is some man, usually a comparatively recent graduate, who, while waiting for his practice to increase, devotes his time to making examinations for his fellow physicians. As his patients increase in number his laboratory work is necessarily neglected and the physicians, and the community as well, suffer unless some other man has appeared to carry on the work. Such a method, although better than none, is not very satisfactory. As a result of these interruptions there have been formed in various cities large private laboratories where the desired examinations can be undertaken. A great drawback to this is the expense. The work requires special training and special apparatus and consequently prices that may seem high have to be charged. This however means that a very large portion of a physician's practice has to get along as well as possible without having the latest methods of science employed in its behalf. This does not seem right either to the individual in question nor to the community. That the public should be exposed to an epidemic of typhoid fever or of diphtheria because a patient is unable to pay for a Widal test or for an examination of a culture from a throat, is absurd. Such matters should be attended to by the larger aggregation of citizens.

The first to recognize this responsibility to the community were the larger cities. It was soon realized that it was much cheaper to spend money to keep the citizens well than to attempt to cure them after they became sick. One epidemic of typhoid or diphtheria or particularly smallpox, would cause a loss to the city of an amount much greater than would be required to conduct an efficient health department. In consequence, one of the early acts of the health boards was the establishment of city laboratories where investigations of conditions bearing upon the city's health could be conducted. The physicians were urged to have examinations made of sputum from suspected tuberculous patients, of cultures from inflamed throats or of blood when typhoid fever was suspected. In this way a careful watch could be kept over the people's health and proper methods be employed to safeguard the community, the expense of such an institution being borne by the city from money obtained by taxation. Such employment of the city's funds is fully warranted by the saving that it brought about, not only of money but of lives.

Such a method as the above can be satisfactorily maintained in the large and concentrated settlements, but it becomes a much more difficult matter when the sparsely settled areas are taken into consideration. They do not have the money to expend in paying a sufficient sum to equip a laboratory and to pay a man to take charge, yet their lives are just as valuable to the State as the lives of those who live in cities.

In a number of States this matter has been solved to a large extent

by the establishment of county laboratories. Such, however, seem to occupy a position between the free laboratory of the city and those conducted by private individuals. The county supplies what money it can and the patients pay what they are able for the examination undertaken. This plan works well in a county that contains many people amongst whom are physicians who not only themselves recognize the value of such methods, but who are willing to work for the advancement of medical science. If, however, the county is not thickly inhabited nor contains a leaven of intelligent physicians, such a laboratory becomes an impossibility. There is then nothing for the physician to do but either to send his specimens to a private laboratory or to neglect that important side of his profession. He cannot send his specimens to a city laboratory as the opportunities there are of necessity restricted to its own inhabitants. They are the ones paying the taxes and consequently those who reap the advantages. If there is no county laboratory the physician is then helpless unless the State comes to his aid.

A number of the States have appreciated the importance of this and their various legislatures have appropriated the money necessary to build and equip laboratories and to pay the salaries required to obtain competent men. In these States the county practitioner is enabled to carry on his work to the best advantage to his patients, to himself and to the community. When in doubt concerning some case he can bring to his aid the advantages that are placed at his disposal. All that is required is that he shall send the material to the laboratory in such a condition that it can be examined to the greatest advantage. The greater the use made of laboratories the greater will be the realization by the medical profssion of the value of such examinations. The more familiar the physician becomes with laboratory findings the better able will he be properly to interpret and apply the knowledge so obtained. In due time he will wonder how he ever got along without employing such assistance and he will find that a desire for accurate diagnosis will soon arise. The doctor will no longer be willing to wait till his patient dies or recovers before deciding whether or not a given tumor were malignant. Cases of "typhoid-malaria" will disappear and the patient will be found to be suffering from either typhoid or malaria, according to whether the Widal reaction is positive or the plasmodium is found in the blood.

The control of the infectious diseases, such as tuberculosis, diphtheria, typhoid fever and smallpox, is by no means a matter of sentiment, it is one of great economic importance. It is being more and more widely recognized that sickness is a source of great monetary loss to the public as well as to the individual, not to mention the suffering that it may inflict upon those dependant upon the sick person. When one takes into consideration the value of the lives lost each year by preventable diseases, and tuberculosis, diphtheria and typhoid fever certainly belong to that class, it can be readily seen that a trifle of that amount if expended for better control of the state health would result in a tre-

mendous saving. Various courts have placed an average value of five thousand dollars on a person's life and when one multiplies the number of deaths from the above three diseases the figures obtained are appaling. In 1900 there were in Missouri 3,459 deaths from consumption, 1,682 from typhoid fever and 1,075 from diphtheria, all due to conditions that need not exist.

In a paper read by Professor Wm. T. Sedgewick some months ago, he shows that Mr. Allen Hazen's theorem, that for every death from typhoid fever avoided by the purification of a polluted water supply, two or three deaths from other causes are avoided, is not only correct but possibly conservative. A hundred deaths from typhoid fever in a year would be a loss of a half million dollars to the community. Then according to Hazen's theory two or three hundred deaths from other causes attributable to the conditions that also bring about typhoid fever might have been avoided. Consequently it is a much wiser plan to prevent people becoming sick that it is to cure them afterwards, even if that were always possible.

It would seem therefore that there should be no hesitation on the part of the State to furnish a proper laboratory. One that is large enough and sufficiently well equipped to allow not only that the routine duties should be carried out to the best advantage, but to permit, as well, the undertaking of investigative work. The great advancement of medical knowledge is largely the result of experimental work carried on in the laboratories. Before new methods can be employed by the profession at large, they must be shown to be of value, but at the same time harmless to the individual. Much of the information has to be acquired from the clinician before the laboratory results can be verified. Consequently the closer the relation between the two classes of workers the better will it be for the science of medicine.

A State laboratory should therefore be a center for the acquiring and dissemination of medical knowledge. From it should come an inspiration for the rest of the State. The men employed should be those of enthusiasm capable of carrying on the work to the greatest good of all concerned. In order that this might be accomplished it would be best that the laboratory be established in a locality that is an active medical center, so that its work can be seen and felt by those directly concerned in the teaching of medicine. The constant contact with other men doing similar work provides a stimulus that is unequalled by anything else. The spirit of rivalry and emulation, when not carried to an excess, has done more for the advance of science than any other factor.

Another important reason for having such a laboratory in a large medical center is that it is at such a place that many students of medicine come to take post-graduate work, to examine into the methods of teaching, or to view the work of other men. Each one of these visitors is an unknown factor in the spreading of information in his own community. He goes to the State laboratory, meets active workers, learns

new methods or obtains the relative value of old ones. The greater the number of such missionaries the greater the progress of medicine in the State. As the advance of medical knowledge means an increase in the health and wealth of the community, any reasonable method to bring about that end is certainly justifiable. Of such methods there seems to be none so valuable or so needed as a well equipped state laboratory, well equipped not only in apparatus but in men.

DISCUSSION.

Dr. I. J. Wolf, Kansas City: The establishment of the clinical laboratory has been one of the features of modern medicine and surgery, and while it cannot be denied that the State laboratory which is accessible to every one, especially those unable to pay, is absolutely a necessity, I make a plea for every physician to be his own laboratory man. The equipment of a clinical laboratory does not cost more than one hundred dollars, nor does it take up more room in an office than a desk; with such an equipment you can make all the clinical examinations you want. In that way you can be sure, provided you know your business, that the thing is done right. If another man does it, you have to depend upon his reliability, and I have had unreliable reports from the most capable men. It is possible to make the Widal test, etc., with such an equipment as I have mentioned. I used to make blood and sputum examinations, cultures, etc., and I still make all my gastric examinations, and you cannot tell from the looks of my office that any laboratory work is going on. I do not pretend to do scientific work, but I do good clinical work. I do think that every one should, for a time, say ten or fifteen years, do his own laboratory work so that he can appreciate the work done by others in the years to come. Nothing so keeps a man abreast of the times as clinical laboratory work. I once thought that I had made a discovery, but believe that after all it is not original with me, *i. e.*, instead of using the cultivating oven to cultivate diphtheria cultures, you can use the Thermos bottle very satisfactorily.

Dr. McConnell, in closing: It is, of course, much better if a man has the time and the ability to do his own laboratory work, and if he has done it a number of years he is much better fitted to appreciate it when it is done by some one else, and he can also more readily detect inaccuracies in the work of others. The routine clinical examinations are not expensive, but if you try to carry out any of those examinations in more extensive directions, you will find that the apparatus required is expensive, and the time is more than the busy practitioner can afford.

THE EARLY DIAGNOSIS AND THE SURGICAL TREATMENT OF CANCER OF THE STOMACH.*

By C. R. Dudley, M. D., Hannibal, Mo.

There is probably no disease whose early diagnosis is more important or more difficult than carcinoma of the stomach. That it is the most common of all forms of malignant disease, is the statement of Osler[1] before a recent medical meeting in England. According to Rodman[2], of Philadelphia, one-third of all cancers of the body originate in the stomach and that of these more than half arise from neglected gastric ulcers. Cancer of the stomach in so far as it depends on a chronic ulcer for its origin, is a preventable disease. It is probable that two-thirds of the whole number of cases may be so classed.

The frequency with which a chronic gastric ulcer takes on a malignant change, a condition in which the symptoms of ulcer have existed for a period of time and which continue to predominate for some time after the malignant growth begins, renders the diagnosis one of extreme difficulty. Even in those cases of gastric carcinoma that have not had their inception in a gastric ulcer, their diagnosis is one of marked difficulty before the tumor has reached a palpable size. Moynihan[3] expresses the opinion that there are no symptoms, and no signs, which either individually or collectively, permit of an assured diagnosis of cancer of the stomach in an early stage. This is a sweeping statement and one that is refuted by skilled internists whose diagnoses of incipient malignancy of the stomach are often brilliant. Moynihan further states that the chemical examination of stomach contents is of little or no value in so far as the early diagnosis of the stomach is concerned. In later cases when a possible diagnosis of malignancy has been made on the clinical evidence, the results of repeated chemical analyses of the stomach contents affords additional evidence of considerable value.

In investigating any gastric disorder, Mayo's advice is to study the history of the affection, ascertain the size and situation of the stomach, determine the existence and location of pain and tenderness, the presence of a tumor, and if the passage of food is interfered with. Moynihan says that the importance of a history of repeated attacks of indigestion, alike in their origin, course and termination cannot be exaggerated. Such attacks he claims are due to a chronic gastric ulcer, which at last becomes malignant.

The age at which cancer is most likely to appear is after 40 years,

*Read in the Surgical Section, Fifty-second Annual Meeting, Missouri State Medical Association, Jefferson City, May, 1909.

but age is less important for the diagnosis than hitherto assumed. Kuttner[4] claims that the wider his experience becomes the larger the number of youthful patients he discovers to have cancer, their youth preventing the correct diagnosis in many cases. A family history of cancer must also be considered.

The loss of muscular strength and weights are among the most constant early symptoms, but bear no definite proportion to the size and position of the growth. These symptoms are liable to occur earlier and to become more pronounced in cases of gastric and hepatic carcinoma than when the disease is situated elsewhere, though there are many exceptions[5]. This is due the destruction of the secreting surface of the stomach and interference with its function, with a resulting interference with nutrition, which is shown by the improvement in strength and weight that follows gastro-enterostomy, although the growth has not been disturbed. In other cases a toxemia derived from the growth must be held responsible, for the complete failure of nutrition and consequent loss of weight is quite out of proportion to the size of the growth and is in fact independent of its position.

A. Albu[6], of Berlin, lays stress upon the rapid decrease in the body weight in a few weeks or a month as significant of cancer of the stomach and as indicative of its beginning. This history is sometimes difficult to obtain unless the patients attention is called to it by close questioning.

The cachexia of cancer patients is of extreme variability and a most unsafe guide for diagnosis. It is usually extremely late in making its appearance and may be ignored in cases which surgical relief may be hoped for. It may be entirely absent until shortly before death. The blood picture shows usually a diminution of hemoglobin, a decrease in the number of red cells and a moderate leucocytosis with a high proportion of polynuclear corpuscles.

The enlargement of the supraclavicular glands is not a reliable sign, though much stress is laid upon this by many European observers. The enlargement of the glands at the attachment of the sterno-cleido-mastoid muscles, especially of the left side has been considered positive, but this may be due to inflammatory or other causes.

The most important early subjective symptoms in most cases of cancer of the stomach are loss of appetite, flatulency, general diffuse abdominal discomfort four or five hours after eating. Loss of appetite is an instructive symptom of cancer, especially when there is pronounced repugnance to meat.[7]

Vomiting is not an early symptom.[8] It may be present in a rapidly growing medullary carcinoma of the body of the stomach, or of a carcinomatous ulcer of the pylorus causing early obstruction.

Pain is not marked in early cases. It is a late symptom and therefore its absence is not to be taken as proof against the presence of cancer. In not a few cases it is absent during the entire course of the disease except in cancer of the pylorus. When present it is constant, heavy, dull

and boring in character and in contrast to the sharp, paroxysmal and periodic pain of ulcer.

Active hemorrhage occurs late as a rule except in a rapid malignant change of a simple ulcer. In all his experience Kuttner has known of only three cases in which profuse hematemesis was the initial symptom. Moynihan, on the other hand, states that acute cases are not seldom ushered in by an attack of severe hematemesis with or without melena. It is possible that such copious bleeding is dependent upon multiple hemorrhagic erosions. Soft encephaloid tumors ulcerate early and bleed early and freely. Densely growing schirrus cancers bleed late and in small amounts.

On local examination the cases may be divided into three groups.

(a) Those that at an early period are generally negative except in the cases than originate in gastric ulcers and give the symptoms of that disease.

(b) Those that at a little later period the local examination may reveal a simple atony and dilatation of the stomach before the growth is palpable. When dilatation of the stomach with stagnation of the food appears rather suddenly in a patient past 45 years whose previous health and habits have been good, the cause will generally be due to an obstruction in or about the pylorus and in the great majority of cases will be found to be carcinoma.

(c) Those with tumor. Most cases are first discovered when a tumor is present. The failure to detect a tumor of palpatable size may result from carelessness on the part of the examiner in neglecting to have a previous thorough evacuation of the bowels and allowing the stomach to become empty before making his examination, having the patient in different positions. A thick abdominal wall or a rigidity of the same may interfere. The latter is of itself of considerable diagnostic importance in that it is caused either from reflexes resulting from adhesions, or from the dread of causing pain and tenderness. This can be largely overcome by repeated daily examinations causing the abdominal muscles to relax. Palpation is usually more satisfactory in the morning than in the afternoon, when there are apt to be gases in the stomach and intestines. Failure to find the mass may be due to the character of the growth, the small nodular or diffuse infiltration forms being more difficult to feel than the more circumscribed scirrhus tumor.

A satisfactory method of palpating a small deep-seated gastric growth is to have the patient sit in bed, with his feet partially drawn up, leaning and resting his head on the examiner's shoulder, who sitting behind him reaches around the patient and palpates the abdomen from the front. The patient's muscles are thus relaxed and the natural descent of the abdominal organs often allows a gastric growth to drop downwards and forwards within touch. Hausmann's[9] method consists in pushing the organ back against the posterior abdominal wall and drawing the fingers downward during expiration following a deep in-

spiration, the procedure being aided by the rising of the stomach and colon during expiration. He claims to be able to palpate the normal pylorus in 18 per cent. of the patients examined.

Distension of the stomach with air may render the tumor more palpable except those situated upon the posterior surface and lesser curvature.

The results of chemical and microscopical examinations of the stomach contents for free hydrochloric acid, lactic acid, the presence of the Oppler-Boas bacillus, and of the stomach contents and feces for food remnants, bits of tumor and occult blood are collectively of great value in determining the character of the gastric affection at an early period. No one or no two symptoms or signs are characteristic, but from a combination of several a reasonable diagnosis can be made. One of the most important of these tests is the examination for occult hemorrhage. This gives a positive result both in ulcer and in cancer, but occurring in the latter in a much larger percentage of cases.[10] Before examining for occult blood the patient must be strictly prohibited from eating meat or flesh food for a period of three days before making the test and must be on an exclusive milk or vegetable diet in order to avoid errors. Either the benzidin or the aloin test may be used. A positive response indicates a probable destructive or ulcerating process, and repeated negative findings exclude cancer with almost absolute certainty.[11]

The diminution or absence of free hydrochloric acid is not of itself significant of gastric carcinoma, as this may occur in many conditions such, as gastritis, jaundice, pernicious anemia, atrophy of the glands of the stomach, tuberculosis, etc. It is diminished in old age, a fact that must be considered in examining for cancer of the stomach in individuals advanced in years. Diminution or absence of free HCl in the stomach occurs with carcinoma of other parts of the body. In 29 cases of carcinoma, not of the stomach, examined by Friedenwahl[12] in 19 there was either a marked diminution or an entire absence of free acid.

In the absence of free HCl we may find lactic acid. They are never present together as the smallest amount of free HCl prevents the formation of the latter. Associated with lactic acid is the Oppler-Boas bacillus, the growth of which is promoted by the blood from the site of the disease. Lack of hydrochloric acid and the presence of lactic acid are not specific for cancer, but if with the lack of hydrochloric and good motor functioning, no occult blood can be detected in the stomach content or feces on repeated examination, this is presumptive evidence against the probability of cancer in doubtful cases.[13]

By means of flouroscopic examinations of the stomach after the ingestion of bismuth, the size, position and contour of the stomach can be observed.

Because of the tendency of chronic gastric ulcer to undergo carcinomatous degeneration and also because of the established fact that surgery offers the only hope for a cure of chronic gastric ulcer itself,

operative measures should be undertaken early for the cure of both and for the prevention of carcinomatous change in ulcer.

In doubtful cases when the patient, of cancer age or even younger, has symptoms of chronic dyspepsia, steady loss of weight, together with evidence of lack of motility of the stomach and a condition of dilatation, one should resort to exploratory laparotomy in order to definitely ascertain the condition existing. The mortality from this procedure is so small that it can scarcely be considered in view of the knowledge to be derived from it, in guiding the surgeon to such further operative measures as may be indicated. Moynihan[14] advises surgical treatment in all cases of stomach disorder in which there is obstruction, stasis or tumor, and in all cases of chronic ulcer. In this way early cases of carcinoma will be found and radical treatment will be possible. In the larger proportion of cases this step is deferred too long.

F. Goldschwend,[15] of Linz, states that in all cases of carcinoma of the stomach when the classical symptoms of tumor, cachexia, and coffee-ground vomit are present, the case is already inoperable, and also those cases, often prove to be inoperable, which, after a careful examination as to its size, motility, contents, etc., without palpable tumor, cachexia, or occult hemorrhage, are diagnosed carcinoma.

In spite of the efforts at early diagnosis we have not progressed very far. Every experienced diagnostician is compelled to admit that in many cases the diagnosis of beginning carcinoma the stomach must be guessed at before operation and not a few of them after the exploratory incision has been made. Osler[16] says that for a surgeon to be successful in stomach work he must be a good pathologist and able to distinguish between ulcer and carcinoma when the abdomen is opened, and even able to make a shrewd guess at ulcus carcinomatosus in its incipiency. He must be a deft and rapid operator with good technique.

The character of the operation to be performed will depend upon the condition when the abdomen has been opened.

If a chronic ulcer is found the surgeon must decide whether to excise it, to infold it, or to provide only for better drainage and a freer outlet for the stomach by a gastro-jejunostomy and leave the rest to nature. Because of the great tendency to malignancy all chronic ulcers of this organ should be removed either by local excision or gastrectomy.

If a malignant growth is found a radical operation should be done if the tumor is not too extensive. Carcinomas which have caused symptoms for a considerable time before operation often give better permanent results than those which necessitate operation early, the latter generally belong to the very malignant, rapidly growing cancers. A pylorectomy or a resection of the stomach should be made after the Mayo method, and gastro-enterostomy should be done.

If the carcinoma is too far advanced for a radical operation and if it interferes with the emptying of the organ a posterior gastro-jejunostomy should be performed for the purpose of providing an outlet

for the stomach and to render the patient's declining days more comfortable. Janssen[17] quoting Stumpf, advises resection even as a palliative operation, as the results are better with this than from gastro-enterostomy alone, and the mortality of 9.5 per cent. is so low that it should not turn the scale against it.

Lund,[18] of Boston, corroborates the statement of Mayo that cancer of the stomach is as amenable to treatment as is cancer of the breast, and states that in operable cases, which means those cases in which the growth with a fair margin of stomach and the involved glands of stomach and the involved glands can be removed, the only treatment which gives any promise of relief is excision.

To the early diagnosis of incipient cancer of the stomach and to the recognized duty of the surgeon to prevent its growth in many cases by removing its selective location in a chronic ulcer will be due the lessening of the mortality of that almost hopeless disease. The surgical statistics in the next decennial period will show as favorably for cancer of the stomach as for this disease in other parts of the body.

REFERENCES.

1. Osler, British Medical Journal, 1907, Vol. I, p. 746.
2. Rodman, Journal of the American Medical Association, Vol. LI., No. 18.
3. Moynihan, British Medical Journal, April 3rd, 1909.
4. Kuttner, Deutsche Medicinische Wochenschrift, XXXIV., No. 2.
5. Thompson, Ohio State Medical Journal, April 15, 1907.
6. Albu, Deutsche Medicinische Wochenschrift, 1906, No. 52.
7. Kuttner, Loc cit.
8. Stone, Amer. Jour. Med. Sciences, Vol. CXXXIV.
9. Hausmann, Berliner Klinische Wochenschrift, Bd. XLV., No. 25.
10. Osler, Loc cit.
11. Citron, Deutsche Medicinische Wochenschrift, 1909, XXXIV., No. 5.
12. Friendenwahl, New York Medical Journal, 1907, LXXVI.
13. Kuttner, Loc cit.
14. Moynihan, Loc cit.
15. Goldschwend, Archiv. f. Klinische Chirurgie, 1908, Bd. LXXXVIII., p. 218.
16. Osler, Loc cit.
17. Janssen, Deutsche Zeitschrift f. Chirurgie, 1906, Bd. LXV.
18. Lund, Jour. Amer. Med. Ass'n, Vol. LI., No. 7.

EXCISION OF THE RECTUM.

By W. H. Coffey, M. D., Kansas City, Mo.

It is not the object of this paper to give an exhaustive treatise on excision of the rectum. I merely wish to make a few remarks which I hope are practical regarding points which have come under my observation.

Some one has said that science moves slowly; that is because we get up such speed we run into the fence before we can stop; then time is lost in fixing it up.

Many are the operations and methods devised for the extirpation of the rectum in part or in toto, and even more of the bowel than the rectum is removed for the various diseased conditions of this part of our anatomy—more or less successfully. We have the Hegar's, Hacheneggs, the Van Heineck, the Kraske's, the Haumsell's, and many more are named. To my mind the one that is the most practical is the one performed by Haumsell, and that one, in my judgment, can be improved on by several very important modifications.

Instead of making an abdominal incision first, I would begin my dissection at the lower end of the bowel and would not use the abdominal incision unless I found it unavoidable. And again, I would not cut the sphincter muscles, as advised by him. In this day of rapid surgery, tissues are cut and lacerated without any thought, as it were, of their value to the economy. However, we are coming to know more and more about the intricate and important structure of the pelvic floor, the superficial and deep fascia, also Colles fascia transverse perinei-muscles, superficial and deep layers of the triangular ligaments. The great sacro-sciatic ligament, the levator ani muscle all have an important function to perform but chief among them all are the internal and external sphincters of the anus.

It is a serious thing when we disturb too much the tracts of glandular secretions, the vasomotor tracts of life-giving power which are under the control of the sympathetic nerves so closely allied with the so-called petric brain. These nerves we have in large numbers in this region, as well as nerves from the cerebro-spinal system. Murphy, in speaking of this operation on the female, advises splitting up the anterior vaginal wall, slitting the body of the perineum down through the sphincter ani muscles reaching the rectum anteriorly. In the hands of an expert operator like Murphy, that might do, but I prefer to do it in a more simple and to me a safer way.

I contend that it is just as feasible and just as easy to do an anal rectomy as it is to do a vaginal hysterectomy. Here nature has given

us a natural opening through which, when properly dilated, we can deliver any ordinary size growth without cutting a muscle or nerve of any great importance.

The only excuse I have to offer for making a few observations and of reporting this case (if I have any excuse at all) is that the time has come when the general surgeon must quit mutilating the pelvic floor.

The case I wish to report is one in which a general surgeon, while doing a proctotectomy, unfortunately tore an opening in the anterior wall of the rectum. An attempt was made to close the opening but was given up as a bad job as the urine, escaping over the parts, would not allow them to heal. I was called and after careful examination made an incision around the whole circumference of the anus at the junction of the skin and the mucus membrane, having first put the sphincters as much at rest as possible by a thorough divulsion, and proceeded, without much difficulty, in dissecting the bowel loose. Hugging closely all the while the external coat of the gut, thereby avoiding the large vessels, keeping all the time the index finger of the left hand in the bowel and doing my dissection over it, using it as a guide, and with slight traction on the bowel as I proceeded with my dry dissection, until I came to the upper border of the wound, the diseased gut was excised and the healthy end anchored with silk sutures to my first incision at Hilton's white line.

The other two cases were those of stricture, the highest up the bowel being 3½ inches. One was the result of traumatism from child-birth. The other I thought was syphilitic but would not give way under the usual anti-syphilitic treatment. Both of these cases were operated upon in a manner as already described.

In conclusion I want to emphasize the fact that through the orifice of the anus we can with careful manipulation of the parts do any surgical operation necessary to be done on the rectum without cutting the sphincter muscles.

224 Bryant Building.

Discussion.

Dr. E. H. Thrailkill, Kansas City: I am glad to learn that Kraske has abandoned the operation he devised and recommended for the removal of growths in the rectum.

I usually employ excision of rectal growths per anal route, provided they are movable and other organs or glands are not involved.

In some cases it is impossible to deliver a growth per anal route. In such cases the muscles may be divided back to the coccyx and no harm arise therefrom, as the incision is parallel with the muscle fibers. With this procedure one can remove high-lyng growths, provded there exists a long meso-colon.

Recently I read, in one of the Eastern journals that this operation was attempted and, owing to a short meso-colon, an abdomino-anal operation had to be resorted to.

Fortunately for us, malignant growths seldom come as low as the sphincters, thus leaving intact the external sphincter and sphincteric nerves. As good results can be obtained here as in other fields, if the same degree of antiseptic precautions be observed.

OVARIAN TUMOR COMPLICATING PREGNANCY WITH RECOVERY AFTER OPERATION.*

By Davis Forster, M. D., of St. Louis.

Cesarean section is at present a popular operation and hospital workers are constantly on the look-out for promising cases. However, it may be that the pendulum will swing too far and we will find a violation of the edict of the least danger and the greatest good to both mother and child.

Occurring synonymously with the case herein reported, is one by Dr. Keyes, of Chicago, alike in pathology except that the case came into hospital in labor and was treated by Cesarean section with good results to the mother but with loss of child.

His method of procedure was to open the abdomen, incise the uterus, deliver the child and placenta, close the uterine incision and then explore the pelvis for ovarian tumor which, having a slender pedicle, was ligated and easily removed.

The teaching at Johns Hopkins Hospital is, that ovarian tumors complicating pregnancy shall be removed by laparotomy as soon as the diagnosis is made.

The presence of an ovarian tumor is one of the most serious complications of pregnancy. It markedly increases the probability of abortion and frequently offers an insuperable obstacle to delivery at the time of labor. After a spontaneous labor its presence occasionally gives rise to disturbances during the puerperium. In a series of cases collected from literature, reported by McKerron, the maternal mortality was 30 per cent., and more than half the children were lost.

The dangers of gangrene from pressure on the tumor, or torsion of pedicle, constantly threatens the patient. The cyst may rupture and extrude its contents into the peritoneal cavity during spontaneous labor.

The presence of ovarian tumor complicating pregnancy often remains unrecognized; the condition having escaped observation in a majority of McKerron's cases.

Nothing but careful routine examinations of all pregnancy cases

*Read in the Surgical Section, Fifty-second Annual Meeting, Missouri State Medical Association, Jefferson City, May, 1909.

can safeguard against such errors. Any excessive enlargement of the abdomen or appearance of pressure symptoms, should call for repeated examinations, and in not a few cases tumor will be found occupying the pelvic cavity.

The failure of the presenting part to engage when the pelvis is known to be normal, suggests an obstructing mass. If the tumor does not occupy the pelvic cavity, the diagnosis is extremely difficult and the abdominal enlargement may be attributed to the presence of twin pregnancy, or hydramnios, and the true condition be not recognized until after labor.

At the Middlesex Hospital, the rule is: to close the abdomen after removal of tumor and leave birth of child to nature.

Hirst, of Philadelphia, advises the removal of tumor with supplementary Cesarean section, not being willing to subject the woman to the strain of labor so soon after a severe operation.

Williams advises strongly against emptying tumor through the vagina. But Edgar says: In cases in which the tumor remains in the pelvis it may cause either a partial or complete obstruction of the birth track. The under surface of the tumor may be made out by vaginal touch. If fluctuation cannot be recognized an exploratory puncture may be made.

History of Case. Mrs. Mary W., age 22, native of United States. Married. Was admitted to the St. Louis Maternity Hospital September 21, 1908. Date of expected labor, November 15, 1908. Reason for early admission, patient stated that two days before she had fallen down a flight of steps, since which time she had continuous severe pain in lower right side of abdomen, with nausea and a feeling of pressure. Her family history was negative. Father dead, mother, aged 58 years, had given birth to two children with easy labors; one sister nullipara.

Patient had whooping cough in childhood and scarlatina at age of 14 years, since which time she had had much pain in the right and left ovarian region. Menstruation began at age of fourteen with intervals of twenty-eight days, lasting a variable length of time, with much pain before, during and after flow.

Patient gave a history of two previous pregnancies, the first interrupted at six months, the cause given being a fall, and case was cared for by a midwife. Second at term (nine months and two weeks), accompanied by no nausea, some headache and much edema.

Labor was accompanied by tear of the perineum and cervix, which were not repaired by the midwife. She went through a normal puerperium, nursing the baby without breast complications.

She last menstruated on the ninth day of February, 1908, for one day, amount small, quickening occurred June 4, 1908, up to which time there had been no vomiting, no edema, but some headache.

Urinalysis, s. g. 1021. Reaction, acid. No sugar, no albumin; elimination of all salts practically normal. Physical examination September 26, 1908, show heart, spleen, liver and lungs, normal.

Breast full, nipples well formed, and secretions watery and cholesterin. Abdomen, oval, umbilicus, protruding, with fundus uteri 23 centimetres above the symphisis pubis.

Her pelvic measurements were: Anterior spine, 26 cm.; crests, 28 cm.; trocanters, 30 cm.; external conjugate, 16 cm.; true conjugate (which could be obtained by pushing up tumor mass), 11 cm.

The fetal movements were distinct, the fetal heart could be heard in the left lower quadrant with a rate of 144 per minute.

Vaginal examination showed perineum dilatable with a tear on the left side containing scar tissue. Vagina roomy, secretion white. Cervix long, torn bilaterally; external os open, internal os closed and cervical secretions normal.

The right examining finger was passed upward in the cul-de-sac of Douglas and to the right side came in contact with a round smooth body which was located against the pelvic bone and was caught below the body of the uterus. It was so situated that the child could not pass it during passage through the canal at birth. The mass was smooth, movable, tense, tender, and could be palpated bimanually by deep pressure.

The question arose as to whether it were a dislocated kidney, an abscess or an ovarian cyst. It seemed too large for a kidney, too sudden in appearance for an abscess and the signs of infection and inflammation were absent, so the conclusion was reached that it was an ovarian cyst, movable, which had become impacted during the fall down stairs and that the pressure of the uterus from above made the wall so tense as to prevent fluctuation.

The patient was placed in bed, carefully watched and examined daily; reposition was attempted in the knee chest position. After a number of consultations it was decided best to open into abdomen through vagina, examine and remove tumor.

On the seventh day after her admission to the hospital after the patient had been prepared in the usual manner and under ether anæsthesia, the incision was made in the posterior fornix of the vagina into the peritoneal cavity. Bleeding was very free, as might be expected with congestion incident to pregnancy.

The finger on entering came in contact with a smooth mass of tumor which was grasped and pulled down upon. Tumor was punctured with outflow of bloody fluid and some blood clots.

The mass of the collapsing tumor was grasped with a long clamp and pulled into the wound. A clamp was adjusted above the tumor, cutting off the blood supply. The mass was cut off and clamp left on for forty-eight hours. Wound was packed with iodoform gauze with rubber drainage tube to the vagina. The tube was left in four days, then wound packed with gauze strips until posterior vaginal wall healed.

It was necessary to catheterize patient for several days. Her highest temperature was 99.4°, and 100 her highest pulse rate. She soon re-

turned to normal, had but slight pain necessitating administration of ¼ gr. morphia on night of operation. Patient vomited several times; uterus showed absolutely no result of interference. Patient continued in normal health until November 15, 1908, when first stage of labor began at 6:00 p. m. Presentation was vertex position, right occipito anterior.

Membranes ruptured spontaneously and a female child weighing 7½ lbs. born at 1:30 a. m. November 16, 1908. Puerperium was normal. Patient was examined November 28th; no evidence of tumor on bimanual examination and patient and child were discharged in a healthy condition.

DISCUSSION.

Dr. Bradley, St. Louis: I want to emphasize the point about the difficulty of making the diagnosis. I remember one case that forcibly impressed upon my mind that difficulty. I examined a patient with Prof. Wortheim in Vienna, and his assistant, Dr. Weibel, and some other doctors in the clinic at the time, and different diagnoses were made as to the condition. The woman was 26 years of age and had never been known to have been pregnant before. Dr. Wortheim and his assistant made the diagnosis of ovarian cyst. Another assistant diagnosed it as pregnancy, and I confessed that I thought it was a fibroid; there were some other diagnoses made, but the majority thought it was an ovarian cyst. When the abdomen was opened, they found the patient about four months pregnant, and three fibroid tumors in the walls of the uterus. The walls of the uterus were exceptionally thin. Some of the uterus was drawn down in the cul-de-sac. The tumor which I felt, and which I thought was a fibroid, was on the right side. I overlooked the head of the child.

Dr. J. D. Griffith, Kansas City: I have operated a couple of times for ovarian cysts complicating pregnancy. I cannot say that I made a positive diagnosis to start with, but I knew there was something there besides the uterus, and we went in and found that it was an ovarian cyst.

I agree with Dr. Crossen, that we should disturb the uterus as little as possible. In both of the cases I refer to the uterus was practically undisturbed. I operated for fibroids in one case, by myomectomy, and the patient went on to term. I think after the third month, when the uterus has risen out of the pelvis, it is not so easily disturbed and emptied of its contents as it would be prior to that time.

Dr. Forster (in closing): I do not think I can add much to what has already been brought out. This does not come under the head of incarcerated uterus. The largest I have ever seen was three or four months. This fetus at eight months did not come under that classification, and I do not think Dr. Crossen meant it that way. In regard to the disturbance of the uterus, if you do not work on the cervix, you can manipulate the uterus a good deal. Any plastic work around the cervix will cause the uterus to empty itself.

REMARKS ON TUMORS OF THE PAROTID GLAND.

By Francis Reder, M. D., of St. Louis.

My reason for presenting this paper must be attributed to the refusal of a patient to have a tumor of the parotid gland removed, because the promise could not be made that no facial paralysis would result from the operative intervention.

When we consider what an interesting array of anatomical structures are centered about the parotid gland, it is very important that the strongest anatomical reasoning be exercised in case of disease where operative measures might be indicated.

An anatomical thought recalls to us that the parotid gland lies on the ramus of the lower jaw, passing deeply behind it, between it and the mastoid process. The external carotid artery, with its great terminal branches, together with the veins which accompany them, the facial nerve and its important divisions, with branches from the cervical plexus, are imbedded in it, while the internal carotid and internal jugular, the spinal accessory, glossopharyngeal and vagus nerves, lie close to its deep surface. The gland is inclosed, excepting its pharyngeal surface, in a strong fibrous sheath. Its duct, which is a resistant, fibrous tube lined with mucous membrane, opens within the cheek opposite the second molar tooth of the upper jaw. Cellular tissue and muscle lie over, or superficial to the parotid, so that it is firmly bound down and covered on its outer aspect. The deep or pharyngeal surface suffers a deficiency of a capsular investment. This has an important bearing on the direction taken by pus when found deeply within the gland and by cancerous growths in their extension. A tumor of the partoid gland may be of a simple or a malignant kind. I may state here that all growths of the parotid gland can be regarded with a strong suspicion, no matter what their character, the most innocent often harboring a feeble malignancy.

This has been explained on the ground that sarcomatous elements, together with glandular, fibrous, mucous and cartilaginous structures have been demonstrated in them. Such growths are known as the mixed parotid tumors. They are met with in both sexes, most frequently between the ages of 17 and 35 years. The presence of cartilage in a parotid tumor, a so-called chondroma, must be explained upon the principle advanced by Lücke and Cohnheim. The cartilage of the first bronchial arch lies at the site of the subsequently developed parotid and fetal cartilaginous structure is enclosed during the formation of the gland.

The common parotid tumor is perhaps the growth with which the surgeon is best acquainted. It is usually fibrous, or glandular for the

most part, but has mixed with it cartilaginous masses and often cysts. This tumor at times invites difficulty as to its differentiation from a diseased condition of the lymphatic glands lying over and in the parotid. A tumor of these lymphatics can be and has been mistaken for the organ itself, the extirpation giving the belief that the parotid gland was being excised.

A common parotid tumor can, by compressing the parotid gland more or less, occasion atrophy and almost total absorption, so that when it is removed a deceptive appearance is produced of the parotid having been excised. Simple parotid tumors are hard, deeply attached, but movable on careful manipulation. They may attain a large size. Their surface is irregular and usually well-rounded in appearance. The skin covering them is thin, but not adherent and not infrequently a network of veins covers the mass. These growths lie below, in front of and behind the ear, and grow slowly. Sometimes they remain stationary for years.

In exceptional cases the inoperability of such tumors is manifested by the firmness with which they are bound down by prolongations sent under the ramus of the lower jaw, filling in the space between the ankle of the jaw and the mastoid process. It is then when they involve the blood vessels and nerves of this important region, coming into relation with the styloid process and its muscles, with the internal as well as the external carotid, and even pressing upon the pharynx and projecting into the fauces.

As a rule, the common parotid tumor, when of ordinary size, has little or no effect upon the general health, and only in exceptional cases causes facial paralysis by pressure.

The tumors which infiltrate the gland substance, give the surgeon his greatest concern. They are the malignant growths and are usually spheroidal cell carcinomata. Clinically, in malignancy the evidence of the physical characteristics of the growth is so clearly portrayed at a comparatively early state, that a diagnosis can be made without the loss of valuable time. We have, for instance, the rapid growth of the tumor, hard or soft, ill-defined and early fixed, usually growing under the ear in persons at or after middle life. With this growth there is associated a pain that is often excruciating, flashing up to the temple and down the side of the neck.

In the rapid growth of a malignant tumor the skin becomes involved early. The virulent infiltration makes it coarse and dark colored, giving it a leathery appearance,—the "squirrhe en plaque" of the French. Its tendency is to spread towards the neck and the region of the mastoid process. This form of schirrus resembles the *cancer en cuirasse* of the mammary gland in all its clinical characteristics.

A different clinical picture can be found in the "squirrhe atrophique." Here we have a depression at the site of the carcinomatous growth, the skin being thrown into small folds which radiate toward the outer margin of this depression.

In the "squirrhe en plaque" the skin in time gives way, causing a broad-spreading, deep, characteristic, bleeding ulcer, with a hardened chain of glands and dilated veins, with facial paralysis and early embarrassment of deglutition and mastication.

In the "squirrhe atrophique," facial paralysis is an early sign and is caused by the massive contraction and compression of the connective tissue element at an early state of the malignant action.

The sarcoma of the parotid is a more common affection than the carcinoma. This is most likely caused by the sarcomatous elements that enter so freely into the formation of the so-called mixed parotid tumors, looked upon as innocent, but in reality feebly malignant, which later on present themselves as malignant growths. The differentiation between sarcoma and carcinoma must be made with the aid of the microscope to be acceptable as a positive diagnosis. As a rule, a sarcoma does not exert as much pressure, nor does it involve and destroy the skin as does a carcinoma. It may, however, show a more marked local malignancy, which accounts for the frequency with which such growths return after excision. Now I wish to speak of the excision of parotid tumors, the part of the disease which is of the greatest interest to the patient.

In venturing an opinion on a parotid growth, it is very necessary that the physical characteristics of the tumor be specifically determined, so that any future embarrassment may be spared the surgeon, should he decide to operate. In many cases the operation is not difficult, though the size and appearance of the tumor may cause it to appear very formidable. Mere size is no contraindication to an operation, for very often the bulk is due to the increase of the tumor being solely in an outward direction. It is when there are deep and irregular prolongations of the growth, when it grows within the capsule of the parotid and when the prolongations have formed close connections with the blood vessels and nerves behind and below the angle of the jaw, that no operation can be more difficult and dangerous.

Other conditions that will influence the judgment in determining for or against an operation are the mobility and circumscription of the growth; the possibility of inserting the fingers below it, as it were, raising it up; the freedom from pressure-effects on blood vessels and nerves; the healthy state of the skin and the lymphatic glands; the rate and direction of the tumor's increase, the age and state of health of the patient, and the possibility of removing the whole mass.

The removal of simple growths is usually readily accomplished without much damage to the facial nerve. It is very desirable that the greatest care be exercised when working in the neighborhood of this important structure. If by some unfortunate stroke of the knife or nip with the scissors, this nerve should be seriously injured, the unpleasant echo will continue to resound long after the tumor matter has been forgotten. Two conditions are really imperative in the removal of simple growths:

One, the capsule, should be completely removed with the tumor mass.

If the capsule cannot be removed with the growth, it is to be excised as thoroughly as is practicable with the least amount of injury to the gland substance proper. This is a procedure, however, which under the most careful dissection has in the majority of my cases given me considerable annoyance, on account of the fistulous condition created by wounding the minute ducts of the small lobules of the gland during the dissection. Usually from three weeks to three months, under careful attention and consoling utterances to the patient, is the time for such a fistulous condition to subside. For this reason, after the overlying parts have been freely divided down to the tumor, the dissection of the mass should be principally a gauze dissection, or by the stronger attachments being severed close to the tumor with the scissors.

The other condition is that of preserving the facial nerve. It would seem better for the peace of the surgeon not to undertake the extirpation at all in an ordinary parotid tumor, should he feel doubtful as to the preservation of this important structure. No promises can be made and should not be made to the patient; it is eminently more satisfactory and safe to tell the patient in a very guarded manner what might and might not happen.

Malignant growths, on the other hand, when subjected to operation, peremptorily invite the sacrifice of any and all structures coming within the operative field, for it is here that an operation, unless carried out most radically, is worse than useless.

The incision influences greatly the working facility of the operator. It is absolutely necessary that a free exposure of the tumor be made. The incision usually passes down the posterior surface of the tumor, a so-called vertical incision lying over the large vessels, and another, a transverse incision, exposing the facial part of the growth. Such an incision meets the requirements for the excision of the ordinary sized tumors. The tumor is best detached from below and behind, upward and forward. By following this part of the technique, the main blood-vessels which are necessarily cut can be secured, obviating the tying of these same vessels again and again in the course of the operation. It has been found comparatively easy to compress and tie the external carotid as it enters the tumor.

It is in dealing with the back of the growth that difficulties chiefly arise. The traumatism to structures that must be evaded can be minimized by keeping close to the tumor, avoiding cutting during the dissection as much as possible. Drainage must be very carefully provided for and no skin removed unless it be diseased.

The question of subjecting a patient suffering with a malignant disease of the parotid to an operation is a very serious one. I have not yet been assured from what I have seen of this work that the good which apparently results, justifies the operative measure. I am rather inclined to deal with such conditions as I would with a malignant disease of the prostate gland,—advise against operation. However, the wish of the

patient must be considered, irrespective of what the surgeon may entertain after a careful examination of the tumor. Through a piece of good fortune it may happen that the structural involvement may be such that an operation might prove of much benefit to the patient, and bring the greatly sought mental relief to him. However, this is the sympathetic side of the question and rather out of place here.

The question of hemorrhage will tax the surgeon to his utmost. I will enumerate the principal vessels that come under the knife in a total extirpation of the parotid: Veins, right jugular, anterior and post facial; arteries: transverse facial, auricular post, occipital, superficial temporal, anterior auricular, orbitalis zygomatic, interior maxillary and the external carotid. Most of these vessels are liable to be much enlarged and numerous anastomoses are usually present.

In the face of such a vascular array, it would be tempting to ligate the common carotid as a preliminary procedure, so that the question of hemorrhage might be reduced to the satisfaction of the surgeon. With the ligation of this important vessel, there is of course always the great risk of exposing your patient eventually to brain mischief. This risk, however, is not to be compared to the risk the patient is exposed to on the operating table when a soft and extensively infiltrated parotid gland is to be removed.

Roux suggested a temporary ligation of the common carotid by passing a loop of chromic catgut ligature around the vessel, loosely tied, entrusting it to an assistant who keeps up tension on the ligature whenever bleeding takes place. Jacobson, whose extensive experience with this class of tumors has made his word authoritative, prefers the ligation of the external carotid with all the accessible branches. It has always answered the purpose to his satisfaction.

To excise a sound unchanged parotid, and one affected with cancer, are very different things. The former can be accomplished with ease, the latter, however, demands experience and mature knowledge in the surgeon who undertakes it.

4629 Cook Ave.

A REPORT ON THE MISSOURI STATE SANATORIUM.

By O. H. Brown, M. D., St. Louis.

This report, aside from its introduction and summary, is the one that was submitted to the Board of Managers of the Missouri State Sanatorium, January 1, 1910, by the retiring superintendent. The report covers the period from August 17, 1907, the date of the admission of the first patient, to January 1, 1910. The writer was in charge of the medical department of the Sanatorium during this time.

In reading this report it should be held in mind that the results have been obtained in spite of heavy handicaps, which need not here be mentioned except to say that they were those that beset all new institutions combined with those that beset most state institutions of Missouri.

During the administration of the writer, it was purposed to keep in correspondence with every living ex-patient; each was expected to report at least once every three months. Some of the information used in this report came, however, from other reliable sources than from these reports.

The law states that the institution is for incipient cases of pulmonary tuberculosis. The term "incipient" has been given various interpretations, but for our purpose it has been considered to be synonymous with favorable. It goes without saying that we endeavored to take only those cases that had a favorable aspect for a more or less complete recovery.

The responsibility for selecting the favorable cases rested and must rest upon the county examiner. The superintendent endeavored to exert an influence upon the examiner's decisions, but occasionally it has happened that the examiner's reports were too inadequate to give much basis for an opinion by anyone. Then again it frequently happened that the examiner was besieged by an anxious friend or relative of the patient and yielded against his own judgment. Thus the Sanatorium has had forced upon it a few cases that were unfavorable from the outset. When it was at all possible these unfavorable cases were sent home, but in several instances the discharging of these sick, helpless, hopeless cases was pushing them into the cold, heartless world, without home or shelter and almost without friends; and this, I am not ashamed to say, I did not have the courage to do. This explanation will account for three or four of the deaths that were had and for most of the few cases that did not do well.

While it is unquestionably true that many, many cases of pulmonary tuberculosis are absolutely and enduringly cured, the conservative tuberculosis specialist has, as a rule, extreme hesitancy in stating that any particular case is cured. The term "apparent cure" is now being gen-

erally used in place of "cure," and "apparent arrest" in place of "arrest;" and if for no other reason than the value of the suggestion to the patient, the substitution is a commendable one.

It is a matter of history now, that nearly all first stage cases are favorable, a good per cent. of the second stage cases is favorable, and a small per cent. of the third stage cases is favorable for greater or less improvement. The classification of cases, even according to the standards recommended by the National Association for the Study and Prevention of Tuberculosis, is to a greater or less degree arbitrary. In deciding whether any particular case belonged to class I., II. or III., the subsequent record of that patient was, in a measure, taken into consideration.

Our records show that, of the 309 cases admitted to the Sanatorium between the dates August 17, 1907, and January 1, 1910, 63 were classed as first stage cases, 219 as second stage cases, and 27 as third stage cases. Of the 63 first stage cases there were, at the time of discharge or before, 56 apparently arrested cases; four were greatly improved and will doubtless yet develop into arrested cases; two were unimproved; one died.

The gain that a patient makes is a fair indication of his improvement. Occasionally only, a patient gains in weight and does not improve in other respects. Almost without exception, of these 63 stage I. cases there was an improvement of all symptoms proportionate or greater to the gain in weight. Three made no gain. Ten gained each from five to ten pounds. Twelve gained each from 10 to 15 pounds. Twelve gained each from 15 to 20 pounds. Nine gained each from 20 to 25 pounds. Two gained each from 25 to 30 pounds. One gained from 30 to 35 pounds. Three gained each from 35 to 40 pounds. For the 60 that made gain, the total gain was 852 pounds, an average of 14¼ pounds per patient. Of the three which did not gain, one had a severe form of arteriosclerosis, one was in the Sanatorium only two days, and one gained splendidly for three weeks and then suffered a backset which ultimately resulted in death. Most of these cases had their symptoms disappear entirely.

The average length of stay in the Sanatorium for the 63 stage I. cases, was three to five months each. One remained less than one week, seven less than a month, 28 less than three months, 44 less than six months, 50 less than nine months, 57 less than one year, 60 less than 15 months, 61 less than 18 months and 63 less than 21 months.

In other words only two cases were here more than 18 months; only three more than 15 months; only six more than one year; only 13 more than nine months; and only 19 were here more than six months.

The subsequent record, up to about the present time, of these 63 patients is that 42 of them are leading at least fairly useful lives at home, and a large per cent. of them are working as hard as ever. Fifteen of the 63 are still taking the cure; there are three dead, one from arterio-

sclerosis, one from appendicitis, and one from a hemorrhage into the pleural sac; from three of the 63 we have had no reliable recent reports.

Of the 219 stage II. cases, 106 were apparently in a stage of arrest at the time of discharge or before; 80 were greatly improved and had every promise of developing into arrested cases; 21 were slightly improved; 4 were unimproved and 8 died. It must be held in mind that most of the unimproved and slightly improved cases were or had been in the Sanatorium only a few days. Some of the slightly improved and some of the greatly improved cases are still in the Sanatorium trying to develop into arrested and possibly cured cases.

Of the 208 stage II. cases that made improvement, 45 gained each one to five pounds; 57 of them gained each from 5 to 10 pounds; 36 of them gained each from 10 to 15 pounds; 40 of them gained each 15 to 20 pounds; 18 of them gained each 20 to 25 pounds; six of them gained each 25 to 30 pounds; four of them gained each 30 to 35 pounds; one gained 40 and one gained 50 pounds. This is a total gain for the stage II. cases of 2,399 pounds, an average per patient of 11½ pounds. The symptoms of these cases improved practically proportionately with the gain in weight.

Again it must be held in mind, that a large number of these patients have been or were in the Sanatorium only a short time. Of the 211 (not counting the eight that died) stage II. cases, two remained at the Sanatorium 21 to 24 months; two 18 to 21 months; three 15 to 18 months; eleven 12 to 15 months; thirteen 9 to 12 months; twenty-six 6 to nine months; forty-eight 3 to six months; fifty-four 1 to 3 months and fifty-two 1 month or less. The average length of stay for each patient was something over four months. A very fair percentage of these cases also experienced the satisfaction of having their symptoms disappear entirely. The reports that have been had within recent months show that 73 of the 211 cases are leading fairly useful lives. In a number of instances the work that is being done is quite heavy, but for the most part these people are following their definite instructions to be particularly careful not to over-do. Some of these cases are doing their graduated exercise at the Sanatorium. Ninety of the 211 are still taking the cure more or less strictly, either in the Sanatorium or at home, and are doing fairly well. Eleven of the 211 have not been heard from within recent months, but unquestionably many of these are doing well.

Of the 27 stage III cases, five were at time of discharge in the state of arrest, four were greatly improved, eight were slightly improved, eight were unimproved and three died in the Sanatorium. Two of these gained each between 30 and 35 pounds. One gained from 20 to 25 pounds. Two gained each from 15 to 20 pounds. Five gained each from 10 to 15 pounds. Three gained each from 5 to 10 pounds. Four failed to make a gain. The total gain for the 23 patients was 220 pounds, an average of a fraction less than 10 pounds per patient. Of the 24 stage III. cases (leaving out the three that died), four remained in the

Sanatorium nine to 12 months; three, six to nine months; three, three to six months; five, one to three months; nine one month or less. The average stay for these cases was a shade less than four months. The reports received from the stage III. cases reveal the facts that four of them are arrested cases and leading fairly useful lives; eight are still taking the cure; thirteen are dead and three are unknown.

Summary.

Over ninety per cent.* of all cases received in the Sanatorium made improvement. Ninety-four per cent. of the stages I. and II. cases made good improvement while in the Sanatorium. The five per cent. that did not gain had serious complications, did not stay long enough, or could not take the cure properly. Over two-thirds of all patients treated in the Sanatorium were second stage cases according to the classification of the National Association for the Study and Relief of Tuberculosis. This emphasizes the fact that the diagnosis of pulmonary tuberculosis is not made as early as it should be, due to the fact that the patients do not go to the physicians in time, and too often the physicians do not recognize the condition promptly.

In concluding, I would call attention to the great need Missouri has for a State Hospital for the care of advanced cases of tuberculosis. During the two and one-half years that I was at the Sanatorium, I refused admission to case after case in pitiful plight,—almost homeless, almost friendless, almost dead, but not too dead or too friendless to scatter the infection to hundreds of healthy individuals.

---

*It must not be understood that 90 per cent. of all cases developed into "apparently arrested" cases. Such might have been the results had all cases continued the cure as long as advised. Time only will allow us to estimate of the "apparent cures" and "apparent arrests," etc., but it seems reasonable to conclude that our results will compare favorably with those of other sanatoria.

OPHTHALMOLOGICAL EXPERIENCE.*

By Barton Pitts, M. D., St. Joseph, Mo.

Personal experience in the practice of medicine, if the observer is competent and honest, is of inestimable value.

There are few in the profession who have the time, ability, or opportunity to devote to original research, yet there is none whose personal experience is without value.

I shall not attempt to include the entire field of opthalmology, but shall only briefly and modestly refer to the more important and practical subjects with which we have to deal.

In surgical operations upon the eye I have entirely discarded all so-called antiseptic agents, particularly in operations upon the eye-ball, otherwise than thorough cleansing with boiled water upon the conjunctiva, and liquid soap upon the skin. Instruments and dressings are previously boiled. Should infection of the conjunctiva be suspected, as evidenced by preliminary bandaging, its source, if possible, should be corrected; if originating in the lachrymal sac, it should be obliterated and the conjunctiva treated for months with a one or two-grain solution of nitrate of silver, properly prepared, and used freely and frequently.

In the use of therapeutic agents, the structures of the eye offer a particularly favorable opportunity to observe their effect; yet, while not an enthusiastic believer in drugs, every one of experience must appreciate their efficacy, especially in their topical use, yet I am convinced there are many instances where their use is harmful; due often to their too great concentration, or too vigorous and frequent application. While if properly and intelligently used, such agents as sulphate of copper, silver and other stimulants are beneficial, yet are susceptible of injury and damage to the delicate structures of the eye, when improperly used.

I have never observed any unfavorable effect from the use of cocaine, but I am convinced that in inflammatory conditions, such as iritis, cyclitis and keratitis, and even in cataract extraction and iridectomy, the use of adrenalin is attended by unfavorable reaction.

The expedient of local blood-letting; the use of the actual cautery for relief of deep-seated pain, fomentations, and the insertion of seatons, particularly in iritis, cyclitis and interstitial keratitis, although practically out of fashion and discarded, have, I believe, in many instances, decided merit, and at least offer us an expedient, of which we often stand in need.

*Read in the Eye, Ear, Nose and Throat Section at the Annual Meeting of the Missouri State Medical Association, Jefferson City, May, 1909.

While I do not wish to appear dogmatic, I will state that after a large and varied experience, extending over a period of twenty-five years, the conclusions upon the following subjects are at least honest, if not in harmony with the views of all others.

In cataract extraction, the flap incision, with a large iridectomy, with the entire expression of all cortical substance possible, without irrigation, offers the simplest and surest method of restoration, to at least a useful degree of vision, especially at the hands of the ordinary operator. Otherwise than some eight or ten cases of involuntary lens extraction, within the capsule, due to dislocation of the lens from fluidity of the vitreous, or an over-ripe condition of the lens and capsule, I have not yet undertaken intentionally the extraction of the lens within the capsule; but I am convinced that this procedure, in at least selected cases, will become the adopted operation of the future. Without exception, in the eight or ten cases referred to above, where the lens and capsule were removed, the outcome was favorable, although there were many other unfavorable conditions present.

In two instances, within the past year, I obtained a successful result by discission, in individuals over forty years of age; ordinarily, however, from thirty to thirty-five should limit the safety period of absorption.

There are conditions under which the operation of couching can be utilized to advantage. In one instance, within the past two years, after operating upon an individual of advanced years, using ordinary precautions, and removing the lens by the usual method, infection followed and the result was negative. The patient's circumstances were such that he was very dependent, and more than anxious to obtain some vision. The lens in the remaining eye I decided to depress, and obtained a useful degree of vision, which has been retained to the present time.

In strabismus cases, there are so many conflicting factors and individual influences as to the cause and treatment, that I am not convinced, from my experience, as to the cause, nor given to the adoption of any one method of procedure. This is a field of investigation in ophthalmology, full of great possibilities. I have seen many cases of strabismus, practically without any error of refraction; many with deteriorated vision in the squinting eye, due to structural changes; and many without; many cases in which the vision in the squinting eye was normal; and one case of most pronounced internal squint, which had existed for thirty years undisturbed, in which the acuity of vision was more than normal, and without any error of refraction, after atropia, and many instances of error of refraction, and deteriorated vision, in one or both eyes, yet no muscular incoördination present. The early and continued use of a mydriatic, avoidance of close vision, frequent and continual occlusion of the non-squinting eye, the persistent use of the stereoscope, correcting glasses, under atropia, with outdoor exercise, and measures of general invigoration, I have found in many instances to afford a successful re-

sult. In operative cases, I prefer the combined procedure of full division of the offending muscle, with advancement of the opposing muscle. Prisms I use only with double tenotomy, if necessary in paralytic conditions of squint.

In lachrymal involvements I have obtained little satisfaction from probes; in non-suppurative cases, division of the lower canaliculus, and stretching the nasal neck of the sac, by the insertion of a pair of angular scissors, closed, and opening the blades freely, is followed by less inclination to cicatrize than by the ordinary incision. In suppurative cases, I divide both canaliculi, including the sac, as freely as possible, and insert a stylet, usually lead preferred; with increasing sizes, and continued until the patient gets tired of coming. This procedure will obviate any further inflammation, and prevent recurrence, and render the eye safe for any subsequent surgical operation, and practically obviates the troublesome epiphora. This porcedure has proven so satisfactory that I have never resorted to extirpation of the entire sac. Formerly I shunned pterygia, but since the introduction of the so-called McReynold's, or Texas operation, consisting of transplantation of the growth, I feel that I can undertake a case of pterygium, without any subsequent growth returning, and the patient demanding his money back. Likewise, in entropion, since the introduction of the Hotz's operation, combined with transplantation from the mucus surface of the lip, if necessary, I feel that I can give a written guarantee, and send the patient away rejoicing.

In ulcers of the cornea, if after removing offending cillia, or other foreign body often present, and the use of atropia, general sedatives and hot applications are not effective, I use the actual cautery, and when all else fails, as is often the case, I resort to a full paracentesis, not too long deferred, even in purulent cases of gonorrhea, involving the integrity of the cornea.

In the ever present, and overwhelming army of martyrs, embraced in the countless number of trachoma victims, I resort to the thorough stripping of the conjunctiva, with the ring forceps, under any anesthetic, followed by the judicious, but long-continued application of the sulphate of copper, and feel that the patient can congratulate himself that, sometime before he dies, he may get a reasonable relief from this distressing and destructive affliction.

In glaucoma I consider a patient has a good cause of action for damages, criminal and civil, if he is denied his right to an early and large iridectomy, extending to the base of the iris; and if there is great increase of tension, particularly in the sub-acute and chronic stages, a preliminary sclerotomy, with the extraction of a few drops of vitreous, should be instituted.

In intraocular diseases I have seen some remarkable results, both in the retention and improvement of vision; but I have not yet been able to satisfy my mind whether they were due to my measures of relief, con-

sisting of electricity, phosphorus and nux, mercury and potash; or to the influence of the grace of God.

Evisceration I prefer to enucleation, except in malignant cases.

Last, but not least, in the fruitful and unending field of profit and glory, the adjustment of glasses has given me more hardening of conscience than all else, in the honorable practice of my profession. While I have satisfied many cases of vanity, and in some instances afforded direct, and greatly appreciated, benefit to vision and health, I have not yet convinced myself that, with the unaided influence of an attenuated focus, we can cure all cases of headache, vertigo, epilepsy, female complaints and ticdouloureux.

DISCUSSION.

Dr. P. I. Leonard, St. Joseph, stated that he had enjoyed hearing the paper, but did not agree with Dr. Pitts in the radical treatment of ophthalmia neonatorum. Trachoma is a disease which leads to cicatrization, and any violent treatment, other than the destruction of trachomatous bodies, would assist in the complete destruction of the conjunctiva, and increase the ultimate sequelæ of the disease.

Dr. John Green, Jr., St. Louis, said the doctor's paper had covered so many interesting points that it was a little difficult in a short discussion to know what to speak of. He agreed with the essayist in the belief that asepsis, rather than antisepsis, should be practiced in operations. He had not used bichloride of mercury for some years, but believed that there were some cases where antiseptic methods should be employed. Adrenalin had a tendency to cause secondary hemorrhage. In operating for cataract, he usually made a large conjunctival flap, as he believed this promoted early union. He referred to the method of operation for entropion, devised by Green, and modified by Ewing, and stated that it gave excellent results in operations on both the upper and lower lids.

Dr. Flavel B. Tiffany, Kansas City, used both chloride of mercury and argyrol. He did not believe in tenotomy of the internal rectus for convergent strabismus, as the eye frequently diverged later on. Instead he usually made advancement of the external rectus, where glasses would not correct. In pterygium he had used McReynold's operation and was accustomed to cauterize the corneal base. In trachoma he used expression, and in old pannus he had used jequirity.

Dr. W. H. Schutz, Kansas City, believed that asepsis was better than antisepsis in operations, and the best fluid to be used was normal saline solution. In operations for entropion, he used Green's method, with good results. In the treatment of trachoma he prefers using Knapp's roller forceps and brossage, with a bichloride solution in the proportion of 1 to 1,000. In the removal of pterygium, regardless of the kind of operation performed and in spite of cauterizing the sclero-

corneal area, he found that the pterygium will sometime return. He prefers the McReynold's transplantation operation.

Dr. J. D. Pifer, Joplin, stated he had not had good results with the transplantation operation for pterygium.

Dr. A. E. Derwent, Clinton, stated that the operator should have a very sharp knife, by means of which he could shave off all the superficial tissue from the corneal border.

Dr. E. J. Norris, St. Louis, stated that, judging from the discussion of operations for pterygium, McReynold's operation was not understood and consequently had not been properly done, which fact accounted for reported failures. In his opinion, when McReynold's operation was properly done, recurrence was a rare thing.

Dr. S. G. Kelly, Sedalia, thought that in general emergency cases, such as he came in contact with, better results were obtained after the use of some mild, non-irritating antiseptic solution, before the operation. He believed that pterygium was a malignant growth, in so far as it rapidly returned in an unsuccessful operation.

Dr. John S. Wever, Kansas City, thought the doctor's paper could not be properly discussed because it covered such a wide range of subjects and might more properly have been entitled "Thirty Years' Practice in Ophthalmology." He believed that the titles of the papers presented should be more specific to allow fair discussion, and that the subject matter presented should be limited in scope so that any one paper would not touch the same ground, as had a dozen other papers on the same program.

Dr. Flavel B. Tiffany, Kansas City, stated he was especially interested in the operation for pterygium and requested information as to the McReynold's operation. He said that McReynold's operation was practically the same as was made at Moorfield's, and was the one he had practiced for many years.

Dr. J. H. Thompson, Kansas City, believed suppuration could be practically eliminated by absolute cleanliness—the patient, the operator and the knife especially, should be perfectly clean. It was his custom to first take the grease off by means of benzene, then follow with alcohol, then with water. In cleansing the face, ordinary soap should not be used, but green soap, properly cooked and prepared, was the correct soap to use. He further took the precaution to douse his own head in water, in order that the skin be damp, and the scurf thus be prevented from getting into the wound. Many eyes are infected from the mouth; therefore, especial care should be taken that the teeth and gums be examined and cleaned before the operation.

Journal
Missouri State Medical Association.

The Official Organ of the State Association and Affiliated County Societies.
Published Monthly under the supervision of the Publishing Committee.

ADDRESS ALL COMMUNICATIONS TO METROPOLITAN BUILDING, ST. LOUIS, MO.

Volume VI. APRIL, 1910. Number 10

E. J. GOODWIN, M. D., Editor.

PUBLICATION COMMITTEE:

Walter B. Dorsett, M. D., Chairman. M. B. Clopton, M. D. M. C. Shelton, M. D.

EDITORIAL

THE HANNIBAL MEETING.

The physicians of Hannibal (Marion County Medical Society) have about completed arrangements for the coming session of the Association on May 3, 4, 5. At this writing the plans for the meeting are as follows:

The general sessions, the House of Delegates and the Medical Section, will hold their meetings in the Assembly Hall of the Mathew-Columbus Building. The Surgical Section will meet in the Commercial Club, whose building adjoins the Mathew-Columbus Building. The Eye, Ear, Nose and Throat Section will meet in the Mathew-Columbus Building. There are a number of small rooms adjoining the meeting halls suited for the Judicial Council and committee work, as well as for exhibitors. The rooms are commodious, with plenty of light and admirably adapted to the uses of the Association.

It is being planned to arrange the work of the delegates so that all business affairs may be completed on the morning of the first day; this will permit the Association to convene in general session in the afternoon for the reading of special reports which have special scientific interest for all members. Another departure is being considered, namely, the reading in the General Sessions of certain papers which are of general interest, but which are listed in the Sections.

Marion County Medical Society is making preparations for entertaining the members in a most cordial manner, and we hope there will

be a large gathering. The committee of Hannibal physicians will meet all trains and conduct the members to their hotels. Dr. R. H. Goodier is Chairman of the Committee of Local Arrangements, and will be glad to correspond with any members concerning any special arrangements that may be wanted. A Bureau of Information will be established at the Commercial Club rooms.

The date of the meeting has been set two weeks earlier than usual in order to enable members to return to their homes and prepare to attnd the meeting of the American Medical Association in St. Louis, June 7-10.

FOR A DEPARTMENT OF PUBLIC HEALTH.

Mr. Robert L. Owen, Senator from Oklahoma, delivered a speech recently in the Senate in which he strongly advocated the establishment of a Department of Public Health, with the Secretary a member of the Cabinet.

The great waste of human life in this country and the enormous percentage of morbidity due to preventable diseases are impressing the leaders of men in other walks of life than the medical profession. Mr. Owen's advocacy of a Department of Public Health is the result of the agitation that has grown out of the great work being done by the American Medical Association and the Committee of One Hundred, and spread its influence into many trades and professions.

In his closing remarks, Mr. Owen made this stirring appeal to the Senate:

> In the name of the people and in the name of the American Medical Association, whose members are the faithful and self-sacrificing guardians of the health of our people, and in the name of the Committee of One Hundred, of the American Federation of Labor, of the National Grange, and of the various health boards of the 46 States of the Union and of the great body of learned men desiring improved sanitation and the application of the improved agencies of preventing disease, disability, and death, I pray the Senate to establish a department of public health.
>
> The principle of the bill meets the general approval of the public-health societies and of the medical associations of the United States, and there should be no difficulty in perfecting this bill and in impressing upon the country the importance of organized effort to control the ravages of tuberculosis, typhoid and malarial fevers, bubonic plague, and other preventable diseases, which inflict such enormous injury upon the people of the United States, impose such vast, but needless, human misery and pain, with great financial loss and loss of prestige and power.
>
> A humane nation will not fail to act when it is known that we could save the lives of 600,000 of our people annually, prevent the sickness of 3,000,000 of people per annum, who now suffer from preventable disease, and greatly abate the volume of human pain, misery and death.

The bill is Senate Bill No. 6049. It should receive the endorsement of our Association and of every County Medical Society. We urge every member of the Association to write to Senators Stone and Warner and request them to support the measure.

WHAT TO DO IN MALPRACTICE SUITS.

The Legal Defense Committee has been called upon to defend several members recently in suits for malpractice. One of the cases was brought to the attention of the committee upon such short notice as to interfere very seriously with the effectiveness of the defense prepared by th committee.

Notwithstanding the fact that the plan for defending members against suits for malpractice has been explained a number of times in these columns, and in other ways, there still seems to be much uncertainty and considerable ignorance of the proper course to pursue in order to enlist the assistance of the Legal Defense Committee.

The plan is very simple and all members should familiarize themselves thoroughly with its workings. The *first* requisite is, that the member who desires the aid of the Defense Committee shall be in good standing with his local society; that is, his dues must be paid at the time suit is brought against him. Delinquency in payment of dues is tantamount to suspension from the Society and deprives the delinquent member of all privileges. *Second,* immediately upon receipt of information that suit has been filed for malpractice, the member must present to the Chairman of the Defense Committee *his request for aid in the defense, together with a full and complete history of the case and the services therein rendered.* Unless this information is furnished promptly, the work of the Defense Committee is rendered exceedingly burdensome, and in fact might result in depriving the member of the services of the committee because of insufficient time in which to prepare the defense. *Third,* the member should not employ an attorney without first communicating with the Defense Committee. The committee will employ an attorney for the defense of the member, but this attorney must be chosen, and the amount of his fee agreed upon, by the committee, not by the member who is to be defended. If, however, the member wishes to employ an attorney on his own account, no objection will be raised, but such additional legal service must be paid for by the member himself.

SANITARY ICE TUMBLERS.

Tumblers made of ice is the latest addition to sanitary utensils. An ingenious Dutch engineer has invented an electrical machine which manufactures ice tumblers "while you wait." The tumbler is made of pure distilled water and is dropped automatically into a paper holder ready for use. It weighs about four ounces, with walls about an eighth of an inch thick at the top, and holds about nine ounces of fluid.

These ice tumblers have been largely used in Paris and other Continental cities for some time, and we shall certainly welcome their introduction in this country. It will be a relief indeed to sip ice tea from a perfectly clean glass—even if it is made of ice. The dirty towel of the busy mixer of cooling potions will then no longer add to the physical distress caused by a parched throat, the mental anguish we endure through the dread of infection from some communicable disease lurking on the rim of a glass unwashed or carelessly slopped in a basin of dirty water underneath the counter.

The ice tumblers are the acme of hygienic cleanliness. No hand touches them in the process of manufacture, and they are destroyed immediately after use. Sanitary science can go no further than this in the prevention of the spread of disease. As for cost, if reports are true, the use of this ice tumbler-making machine ought to be cheaper than the employment of ordinary glassware, since the ice tumbler and the paper holder can be made for a fraction of a cent.

THE MEDICAL SECRETARIES ASSOCIATION.

The Society of County Secretaries will meet on Tuesday afternoon, May 3rd, at 4:30. Dr. Frederick R. Green, Assistant to the General Secretary of the American Medical Association, has accepted an invitation to be present at this meeting and will deliver an address. Other papers on the program at this writing, are:

What Should County Societies do with Advertising Doctors. By Dr. Bert B. Parrish, Kirksville, Mo.

Some of the Duties of the County Secretary. By Dr. E. L. Stewart, Kansas City, Mo.

The Young Men in the Society; How to Interest Them. By Dr. J. L. Burke, Laclede, Mo.

A six o'clock dinner will be served at the Commercial Club.

EDITORIAL NOTES

THE STEAMBOAT TRIP TO HANNIBAL.—Those who desire to make the trip to Hannibal on the steamboat excursion from St. Louis should notify Dr. Clarence Loeb, Humboldt Building, St. Louis, at once. It is necessary to complete arrangements by April 15th. If the number of applications received by that time does not justify chartering the boat, the trip will be abandoned.

It is planned to leave St. Louis on May 2nd and arrive in Hannibal early on the morning of the 3rd. Those who make the trip will live on the boat during the meeting. The cost of the trip will be approximately $12.00.

ST. JOSEPH-BUCHANAN County Medical Society has established a weekly bulletin. The first issue appeared on March 1st. This is certainly the best method of keeping the members of the county society informed upon the progress of affairs in the society. All members cannot be present at every meeting but their interest in the work will be less likely to suffer a decline when a bulletin is published regularly containing information of the work that has been done and what is in contemplation to do. There are now three bulletins issued weekly by county societies, viz: The St. Louis Medical Society, The Jackson County Medical Society and The St. Joseph-Buchanan Medical Society.

THE following is a list of the hotels at Hannibal with the rates per day:

Mark Twain Hotel (Headquarters), American plan, $2 to $3 per day. Conklin Hotel, American plan, $2 per day. Kettering Hotel, American plan, $2 per day. Windsor Hotel, European plan, 50c to $1 per day. Union Depot Hotel, European plan, 50c to $1 per day.

Members should write promptly and reserve accommodations in advance so that there will be as little confusion and disappointment as possible upon arrival. The Local Committee of Arrangements will have a list of boarding houses and private homes where members may secure accommodations. Communications on this subject, addressed to Dr. R. H. Goodier at Hannibal, will have attention and rooms will be reserved.

PRESERVATIVES and Press Agents. Many and devious are the ways by which those who would "doctor" our food attempt to create public sentiment in favor of chemical preservatives. During the last few

months a harmless looking letter signed "H. L. Harris" has appeared in the newspapers of those cities and towns in which deaths from ptomain poisoning (much-abused term) have recently been chronicled. This letter—we use the singular advisedly—does not vary in its wording in different papers, except for the opening sentence. It begins by referring to the death which the writer has seen reported in the paper written to, and then continues:

"It is certainly appalling to learn how rapidly ptomain poisoning cases have increased since the enforcement of the pure food law. According to press dispatches there have been in the United States since the enforcement of this law 16,492 cases of ptomain poisoning, 573 of which were fatal. Prior to the enactment of the pure food law borax and boron compounds were used on meat, fish, fowl, sausages, oysters, etc., consequently such food, which readily becomes contaminated, was kept in a hygienic, healthful condition. * * *"

And much more to the same effect. The letter closes with the suggestion that the law should be so amended "as to permit the use of modern non-injurious preservatives." Not only in the form of letters do we find these much-reiterated sentiments of Mr. Harris. Overworked editors occasionally use them *en bloc* to fill a gaping void on the editorial page. For instance, we find in the Alliance (Ohio) *Review,* December 4, 1909, an editorial (?) entitled "Ptomain Poisoning," which begins:

"A recent case of ptomain poisoning in Alliance has caused the thought that it is certainly appalling to learn how rapidly ptomain poisoning cases have increased since the enforcement of the pure food law. According to press dispatches there have been * * * *"

And so on; the Harris letter *verbatim et literatim.* As many of our readers will remember, the H. L. Harris who thus champions the cause of boron compounds as food preservatives is the press agent of the Pacific Coast Borax Company, sometimes called the "borax trust." Harris also writes under the name of "H. H. Langdon," and on the stationery which carries this name he calls himself a "Food Expert," although the New York City directory has him listed as a "journalist." He has for years, under one or the other of these names, been writing "articles" systematically attacking pure-food legislation in general and Dr. Wiley in particular. It would be well for physicians to notice with some care both the correspondence and editorial columns of their local newspapers when cases of ptomain poisoning have been chronicled. The chances of a pro-borax article appearing subsequently are good in proportion to the care exercised by the clipping bureaus which furnish the borax company with such news items, and the carelessness of the editors of the papers which accept the Harris-Langdon inspired communications—either for correspondence or as "editorials."

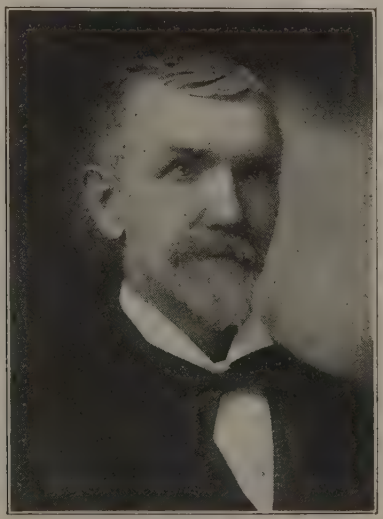
These articles are not likely to appear in the metropolitan dailies, because nearly all such papers belong to an association which furnishes them with lists of press agents. But it is the papers of the smaller towns

that Harris-Langdon delights to dupe into printing his contributions in favor of chemical preservatives. It is in such towns that the wide-awake physician can do yeoman service in the interest of public health by enlightening those editors who, through no fault of their own, are, or may yet be, misled into giving free publicity in the interests of the sophisticators of foodstuffs. Of course, in those cases in which the editor calmly appropriates Harris' "dope" and prints it as his own, the physician will not be thanked for mentioning the fact—but the editor should be advised, just the same.—*Jl. American Medical Association.*

OBITUARY

JAMES THOMPSON, M. D.

Dr. James Thompson died at his residence February 13th. Born near Plattsburg, Mo., in 1845, he graduated at the Jefferson Medical College in Philadelphia in 1870 at the age of twenty-five years. He at once started practice in Osborn, Mo., where he remained only two years



JAMES THOMPSON, M. D.

and in 1872 located at St. Louis, where for fifteen years he devoted his time and energy to his specialty—gynecology and surgery. After fourteen years of successful practice in Missouri, he was compelled on account of poor health to move to Florida. This was in 1884, and three years later found him in Butte, Montana; after a stay there of only a

few months, Dr. Thompson went to New York City for post-graduate work. He remained there fourteen months, devoting his entire time to clinics. In 1889 he came to Kansas City, where he has for over twenty years been recognized as one of the leading men in his specialty. At death Dr. Thompson was sixty-five years of age and, though for years not having enjoyed the best of health, his ambition to press forward to the end, his zeal and energy to accomplish yet greater things, combined with his gentle manner, caused him to be looked upon as a man younger than his years. He became a member of the Jackson County Medical Society in 1899, and was ever one of its most faithful workers.

CLARENCE W. PICKERILL, M. D.

Dr. Clarence W. Pickerill died at the home of his parents, Lake Charles, La., February 20, 1910. He graduated at the Iowa Eclectic Medical College, Des Moines, in 1892. He never practiced or claimed to practice sectarian medicine. He joined the Jackson County Society in 1905.

In 1906 Dr. G. R. Pickerill, the doctor's brother, who had two years previously graduated at the Kansas City Medical College, contracted pulmonary tuberculosis, and it was no doubt Dr. Pickerill's constant personal attention upon his brother that caused him to contract the disease. He sent his brother to Colorado, New Mexico and Texas, but after only a few months he returned home where he died. For a few months following his brother's death Dr. Pickerill continued his practice, but his health began to fail, and soon he too went West.

Dr. Pickerill was a high degree Mason. His funeral services were conducted by the Shriners. He leaves a wife, father, mother and a host of friends to mourn his death.

W. F. MITCHELL, M. D.

Whereas, It is our painful duty to report the death of our honored member, Dr. W. F. Mitchell, who died September 11, 1909, therefore

Resolved, That in the death of Dr. Mitchell his family has lost a devoted husband and father, our society a faithful and useful member and the community an upright and honored citizen.

Resolved, That we will bear in grateful remembrance the zeal with which Dr. Mitchell discharged all his professional duties.

Resolved, That we tender our sympathy to the bereaved widow and children.

Resolved, That a copy of these resolutions be spread upon our records and an engrossed copy sent to the family of our deceased member.

Jule Keller,
A. J. Drake,
J. B. Bridges,
The Committee.

DR. J. L. HARRINGTON.

Dr. J. L. Harrington was born in Cincinnati, Ohio, August 30, 1867. Died December 8, 1909. He came to Kansas City with his father and family in 1870, and graduated in the University Medical College in 1889.

After a sojourn of several years in New Mexico he returned to Kansas City, and for three years was connected with the health department, where he performed efficient service. Upon retirement from the board he built up a creditable private practice in his specialty, genito-urinary diseases. Upon the organization of the Medico-Chirurgical College, of which he was one of the founders, he became secretary of the institution, and professor of genito-urinary diseases thereof, until the school became merged into the School of Medicine of the Kansas University. Upon the organization of the Kansas City Post-Graduate Medical School and Hospital he held the same chair therein, and was secretary of the board of directors. It can be said of Dr. Harrington that he was an untiring worker, a faithful and capable teacher, an upright gentleman and a loyal friend. No duty was ever neglected by him, and in the positions he held in the schools with which he was connected he was one of the most zealous and successful workers.—*Kansas City Med. Index-Lancet.*

CORRESPONDENCE

To the Editor:

The St. Louis Maternity Hospital desires to place before you a plain, frank statement of the scope of its work and aims as well as to give you some information concerning the accommodations and equipment which it has to offer. This is not a begging appeal for support, but an offer of service in a field where there seems to be a great need in St. Louis.

The St. Louis Maternity Hospital is a hospital for obstetrical patients and is under the control of a board of lady managers.

An impression has gained circulation that this hospital is a refuge for the confinement of fallen girls. It is mainly to correct this idea that the present letter is being sent out. The hospital has a two-fold purpose: (1) To care for married women who can pay but little or nothing toward the expenses of their confinement, and who, for one reason or another, can not or should not be confined at their home; (2) to provide a home during confinement for unmarried girls during their first pregnancy. No girl is admitted to the St. Louis Maternity Hospital during a second illegitimate pregnancy, or whose character is such as to make her an undesirable patient for the institution. A considerable number of such women have been refused admission during the past year. Physicians need have no concern, therefore, in sending to our hospital such married women as do not wish to be confined at home. On the other hand, special efforts are made to care for the unmarried women after confinement. The mother instinct is fostered. Employment is found for those who must earn their own living, and their material and moral welfare looked after as opportunity affords.

The hospital has about thirty available beds so arranged that about one-quarter of them are in private rooms, accommodating one, two, or three patients. These are at the disposal of patients who are willing

to pay the moderate rates of the hospital for their accommodation. Patients receiving free treatment and paying only part of their expenses are taken care of in small wards. Those patients able to pay for their hospital service can find accommodations ranging in expense from $10 to $25 per week for board and nursing. In addition there is a moderate fee charged for dressings, medicine, etc.; no extra fee for delivery room except in operative cases. The medical fee is arranged by each individual patient with her private physician.

Applications for admissions and inquiries may be made at the hospital at any time.

The medical staff of the hospital comprises some twenty practitioners, skilled in the various fields of medicine. The immediate oversight of the medical side of the hospital is in the hands of an active visiting staff of four obstetricians, with a resident physician always on call.

The nursing and household arrangement is under the charge of a graduate nurse of exceptional experience, while a staff of seven senior nurses from some of the leading nurses' training schools of St. Louis, have the immediate care of all the patients.

Further inquiry concerning any phase of the work or aims of the hospital may be addressed to the Secretary of the Board of Lady Managers or to the hospital at 2621 Locust Street, St. Louis, Missouri.

Respectfully,

MRS. A. W. LAMBERT,
MRS. A. S. BOYD,
MRS. GEORGIE NOBLE BRUNAUGH,
Committee for the Board of Lady Managers.

JOHN YOUNG BROWN, M. D.,
BERNARD W. MOORE, M. D.,
FRED J. TAUSSIG, M. D.,
Committee for the Medical Staff.

AUXILIARY COMMITTEE ON PUBLIC POLICY AND LEGISLATION.

A request having been received from the Committee on Legislation of the American Medical Association for a list of the members of the Missouri Auxiliary Legislative Committee, the following members were selected:

MISSOURI AUXILIARY LEGISLATIVE COMMITTEE.

Name.	Address.	County.
W. W. Best	Bolckow	Andrew.
Austin McMichael	Rockport	Atchison.
C. A. Rothwell	Mexico	Audrain.
D. L. Mitchell	Cassville	Barry.
E. N. Chastain	Butler	Bates.
C. F. Brown	Lamar	Barton.
Marion Dillon	Fairfield	Benton.
C. M. Witmer	Marblehill	Bollinger.

Name.	Address.	County.
A. B. McComas	Sturgeon	Boone.
P. I. Leonard	St. Joseph	Buchanan.
W. F. Taylor	Poplar Bluff	Butler.
Tinsley Brown	Hamilton	Caldwell.
Martin Yates	Fulton	Callaway.
G. T. Meyers	Macks Creek	Camden.
E. H. G. Wilson	Cape Girardeau	Cape Girardeau.
R. F. Cook	Carrollton	Carroll.
J. A. Chilton	Van Buren	Carter.
M. P. Overholser	Harrisonville	Cass.
J. W. Dawson	El Dorado Springs	Cedar.
C. A. Jennings	Salisbury	Chariton.
James A. Robertson	Ozark	Christian.
F. B. Miller	Kahoka	Clark.
J. M. Allen	Liberty	Clay.
P. M. Stockman	Plattsburg	Clinton.
J. B. Lionberger	Boonville	Cooper.
W. L. Brosius	Gallatin	Davies.
R. A. Evans	Amity	DeKalb.
W. E. Rudd	Salem	Dent.
B. T. Landis	Ava	Douglas.
W. E. Sturgis	Kennett	Dunklin.
A. C. Brown	Moselle	Franklin.
John D. Seba	Bland	Gasconade-Maries-Osage.
G. W. Whitely	Albany	Gentry.
J. E. Dewey	Springfield	Greene.
Bertha M. Sutton	Trenton	Grundy.
E. H. Bryson	Bethany	Harrison.
Robt. D. Haire	Clinton	Henry.
J. F. Chandler	Forest City	Holt.
J. B. Fleet	New Franklin	Howard.
H. C. Shuttee	West Plains	Howell.
G. W. Farrar	Ironton	Iron.
Herman E. Pearse	Kansas City	Jackson.
R. M. James	Joplin	Jasper.
R. E. Donnell	De Soto	Jefferson.
E. H. Gilbert	Warrensburg	Johnson.
A. R. Wiley	Hurdland	Knox.
S. A. Casey	Lebanon	Laclede.
C. T. Ryland	Lexington	Lafayette.
A. H. Madry	Aurora	Lawrence-Stone.
Paul F. Cole	Steffensville	Lewis.
W. P. Smith	Troy	Lincoln.
F. W. Burke	Laclede	Linn.
J. C. Shelton	Chillicothe	Livingston.
M. P. Sellers	Anderson	McDonald.
A. B. Miller	Macon	Macon.
William Nifong	Fredericktown	Madison.
C. R. Dudley	Hannibal	Marion.
C. R. Buren	Princeton	Mercer.
W. S. Allee	Olean	Miller.
W. P. Howle	Charleston	Mississippi.
H. C. Freudenberger	Clarksburg	Moniteau.
W. T. Bell	Stoutsville	Monroe.
W. M. Wheeler	High Hill	Montgomery.
H. N. Lutman	Versailles	Morgan.
J. H. Timberman	New Madrid	New Madrid.
Horace Bowers	Neosho	Newton.
W. M. Wallace, Jr	Maryville	Nodaway.
J. L. Eblen	Alton	Oregon.
J. W. Johnston	Hayti	Pemiscot.
F. M. Vessells	Perryville	Perry.
W. J. Ferguson	Sedalia	Pettis.
G. W. Orrick	Rolla	Phelps.
M. O. Biggs	Bowling Green	Pike.
Alva Naylor	Platte City	Platte.

Name.	Address.	County.
J. F. Roberts	Bolivar	Polk.
James A. Townsend	Unionville	Putnam.
T. J. Downing	New London	Ralls.
C. B. Clapp	Moberly	Randolph.
H. S. Major	Hardin	Ray.
H. W. Chilton	Corridon	Reynolds.
J. T. Redwine	Doniphan	Ripley.
F. J. Tainter	St. Charles	St. Charles.
Ruth Seevers	Osceola	St. Clair.
R. W. Lanning	Ste. Genevieve	Ste. Genevieve.
A. L. Evans	Bonne Terre	St. Francois.
R. M. Funkhouser	4354 Olive Street	St. Louis (city).
John Pittman	Kirkwood	St. Louis (county)
D. C. Gore	Marshall	Saline.
H. E. Gerwig	Downing	Schuyler.
E. E. Parrish	Memphis	Scotland.
W. S. Hutton	Fornfelt	Scott.
P. D. Gum	Birch Tree	Shannon.
L. W. Dallas	Hunnewell	Shelby.
John Ashley	Bloomfield	Stoddard.
C. S. Wilson	Green City	Sullivan.
Elizabeth McIntyre	Branson	Taney.
John Phimister	Houston	Texas.
H. C. Jarvis	Schell City	Vernon.
E. A. Fluesmeier	Wright City	Vernon.
W. S. Smith	Belgrade	Washington.
R. J. Owen	Mill Spring	Wayne.
W. R. Beattie	Marshfield	Webster.
J. K. Phipps	Grant City	Worth.
L. D. Bruton	Hartville	Wright.

In view of the desire of the American Medical Association to have, for statistical purposes certain information regarding the general financial and social conditions of the members of the profession in Missouri, the ways and means for best obtaining this information was informally discussed and the Secretary of the Committee was instructed to draft a form letter requesting the information desired and to present it at the next meeting of the Committee for consideration and action.

FIFTY-THIRD ANNUAL MEETING.
HANNIBAL, MAY 3-5, 1910.

Preliminary Program.

SURGICAL SECTION.

Vaginal Fistula. By R. F. Amyx, M. D., St. Louis.

Bursitis. By J. F. Binnie, M. D., Kansas City.

The Treatment of Trifacial Neuralgia by Deep Injections. By Vilray Papin Blair, M. D., St. Louis.

Cases Illustrating Some Points in the Surgery of the Large Bowel. By John Young Brown, M. D., St. Louis.

The Technic of Immediate Closure of the Bladder Following Suprapubic Cystotomy. By C. E. Burford, M. D., St. Louis.

Intestinal Obstruction. By O. Beverly Campbell, M. D., St. Joseph.

Estheomine; Report of a Case with Exhibition of Photographs. By C. L. Castle, M. D., Kansas City.

Review of the Literature on Post-Operative Phlebitis. By W. A. Clark, M. D., Jefferson City.

Spontaneous Sterilization in Pelvic Inflammatory Masses, and its Bearing on the Operative Treatment. By H. S. Crossen, M. D., St. Louis.

Conditions Affecting the Functions of the Biliary Apparatus Which Demand Surgical Intervention. By Louis J. Dandurant, M. D., St. Joseph.

Intestinal Obstruction from Appendiceal Adhesions. By C. R. Dudley, M. D., St. Louis.

Cocaine Anesthesia in Herniotomy. By Cortez F. Enloe, M. D., Jefferson City.

Myomectomy for Uterine Fibroids. By W. J. Frick, M. D., Kansas City.

Osteophites of the Os Calcis. By J. D. Griffith, M. D., Kansas City.

Prostatectomy, Without Opening the Bladder, by the Perineal Route With Immediate Suture. By Arthur E. Hertzler, M. D., Kansas City.

Operations for the Cure of the More Severe Types of Uncomplicated Lacerations of the Pelvic Floor. By Howard Hill, M. D., Kansas City.

The Surgical Treatment of Bone Tuberculosis in the Adult. By Alexander E. Horwitz, M. D., St. Louis.

Membranous Pericolitis. By Jabez N. Jackson, M. D., Kansas City.

Paget's Disease of the Nipple; With Report of an Interesting Case. By Ernst Jonas, M. D., St. Louis.

Rupture of the Intestine from Abdominal Traumatism. By H. P. Kuhn, M. D., Kansas City.

Carcinoma of the Penis. By W. E. Leighton, M. D., St. Louis.

Surgical Suggestions. By T. F. Lockwood, M. D., Butler.

Fulguration in the Treatment of Cancer. By F. J. Lutz, M. D., St. Louis.

Bladder Stone. By Ernest G. Mark, M. D., Kansas City.

Resection of the Large Intestine for Malignant Disease. By C. M. Nicholson, M. D., St. Louis.

Further Experience With the Internal Splint in the Treatment of Fractures. By Herman E. Pearse, M. D., Kansas City.

On Fallacies in the Understanding of Antisepsis. By Marsh Pitzman, M. D., St. Louis.

The Appendix Stump. By M. G. Seelig, M. D., St. Louis.

X-Ray Diagnosis of the Diseases of the Intestinal Tract. By E. H. Skinner, M. D., Kansas City.

Surgery of the Bile Ducts. By Frank Joseph Tainter, M. D., St. Charles.

EYE, EAR, NOSE AND THROAT SECTION.

Otitic Cerebral Abscess With Rare Ocular Symptoms. By Carl Barck, M. D., St. Louis.

Surgery of the Nasal Septum. By W. D. Black, M. D., St. Louis.

The Combined Effect of Dionin and Eserin in the Treatment of Chronic Glaucoma. By W. A. Camp, M. D., Springfield.

Discussion opened by Dr. B. Freyer, Kansas City.

Conservation in Acute Mastoiditis. By Fayette C. Ewing, M. D., St. Louis.

Lantern Demonstration of Pathological Specimens of the Middle Ear. By L. K. Guggenheim, M. D., St. Louis.

A Suggestion in the Treatment of Trachoma. By E. T. Hornback, M. D., Hannibal.

Discussion opened by Dr. John C. Faris, Caruthersville.

Suppurative Ethmoiditis. By J. D. Pifer, M. D., Joplin.

The Effect of Adenoids and Diseased Tonsils Upon the General Health. By W. B. Post, M. D., Carthage.

Leprosy as Seen at the San Lazores Hospital at Havana. By F. B. Tiffany, M. D., Kansas City.

COUNTY SOCIETY NOTES

ADAIR COUNTY MEDICAL SOCIETY.

Adair County Medical Society held its regular monthly meeting on March 3, 1910, at the office of Dr. F. R. Butler, Kirksville, with the following members present: Drs. Butler, Reid, Callison, Rankin, Martin, Chinn, Chandler, Parrish and Parrish.

The scientific program was taken up, and Dr. T. R. Butler, of Kirksville, gave a well prepared lecture on "Glaucoma," demonstrated with charts. He brought out in a most careful manner and comprehensive way the etiology, pathology, symptomatology, diagnosis, prognosis and treatment of this condition and demonstrated his intimate knowledge of the subject. The lecture was greatly appreciated by those present. The paper was freely discussed and a number of interesting points were brought up and it is the wish of the society that we have more such splendid meetings.

As a whole the society is in excellent condition and the members are taking an active interest in its affairs.

The society adjourned to meet with Dr. E. C. Callison in Kirksville on Thursday evening, April 7.—Bert Parrish, M. D., Secretary.

CHARITON COUNTY MEDICAL SOCIETY.

On March 10th the Chariton County Medical Society held an open session at the First Christian Church, Salisbury. At this public meeting addresses were made by Drs. Tinsley Brown and Frank J. Lutz. The special music that had been arranged helped very much to the success of the meeting. A banquet and smoker was held after the meeting.

Those present were Drs. Tinsley Brown, Frank J. Lutz, Epperly, Welch, McAdam, Knott, Kirkpatrick, Hawkins, Brummall, Austin, Baker, Morey, Gaines, Hawkinson.—G. W. Hawkins, M. D., Reporter.

GREENE COUNTY MEDICAL SOCIETY.

Greene County Medical Society met in regular session Friday, February 25th. The attendance was good, considering the inclemency of the weather.

Dr. S. W. Tickle read a very instructive paper on "The Financial Side of a Doctor's Life." He urged prompt collections, close adherence to the fee list, and organization for financial reasons. The paper was discussed by most of the members present.—THOS. O. KLINGNER, M. D., Secretary.

HOWARD COUNTY MEDICAL SOCIETY.

Howard County Medical Society held its regular monthly meeting at Fayette on March 1st. Present: Drs. Wright, Richards, Lee, Lewis, McGee, Moore, Bonham, Champion, Kitchen and Watts. Dr. A. R. McComas, Councilor for the district, was present and gave us some very sound and wholesome advice on medical legislation and how to increase the interest in county societies.

Dr. Richards presented a patient, a young man with an affection of the shoulder. The case was examined by the members and the condition fully discussed.

Dr. Watts presented the case of sarcoma of the right leg which he has had under treatment, showing the patient to be doing nicely.

Dr. C. H. Temple, of Glasgow, was received in membership on transfer from Chariton County Medical Society.

The committee on resolutions on the death of Dr. May B. Collins was requested to send a copy of the resolutions to Mrs. Collins.

At the next meeting the subject for discussion will be: The Heart, Its Physiology, by Dr. Wright; Its Anatomy, by Dr. T. C. Richards; Its Diseases, by Dr. Watts.

The next meeting will be held on the first Friday in April.—C. W. WATTS, M. D., Secretary.

LAWRENCE-STONE COUNTY MEDICAL SOCIETY.

The Lawrence-Stone County Medical Society convened at Aurora, March 1st. Dr. J. P. Andrews, the new president, called the society to order at 10:30 a. m. The business affairs of the society were cared for and adjournment was taken until 1 p. m.

Dr. Craven, of Marionville, was ready at 1:15 p. m. with his paper, "My Experience with Typhoid Fever the Past Year." Case No. 1 illustrated the disposition of one class of people to oppose and to dictate to, the doctor, and to try to boss the physician in the management of the case. Case No. 2 was peculiar in that the appetite was never lost, the patient complaining of hunger all the time. No. 3 had constipation throughout the attack, craved acids and shed the epidermis at the end of the period. No. 4 had ill defined but sever pains in the abdomen, none of which pains could ever be located. Cases 6, 7 and 8 were in the same family; one complained of pains that could not be located and developed a habit of pinching the groin. This patient finally had convulsions and died.

The discussion by Drs. Henson, Stevenson, Rodman and others, emphasized the fact that a physician in charge of a typhoid, or any other patient, should not tolerate interference or bossism from any one, and should demand a release from "superior orders" and other handicaps or promptly quit the case. All were agreed as to cleansing the alimentary canal and as to the value of intestinal antiseptics; and some had noticed a constipation in some of their cases. Dr. Rodman believed it would soon be considered a crime, for which somebody would be held responsible, when typhoid fever appeared in a town or community. He considered the contamination of the food or water as always the cause, and that the fly was often the carrier of the germ.

Dr. Loveland reported a number of cases of diphtheria that he had treated, with varying results. He desired to know how one might make a positive clinical diagnosis, and if antitoxin was as efficient in the nasal and laryngeal as in the tonsillar variety. The doctor had experienced some difficulty, from prejudice of the parent, in giving antitoxin early and often enough to obtain the happiest results. The older members advised to give antitoxin when he thought it indicated, or to walk off and leave the case. Doctors Stevenson, Ament, Rodman, Madry and others took part in this discussion. The insidious approach, the peculiar patch and surrounding reddened zone of diphtheria, were placed in contrast with the rapid invasion, the chill and high fever of follicular tonsilitis as points of differential diagnosis, and the obscure location of the nasal and laryngeal forms, which allowed the disease longer time to gain foothold before detection, would account for the apparently small effect often seen from a large dose of antitoxin.

Dr. Rodman, of Pierce City, presented a clinic, "Cretinism Complicated by Jacksonian Epilepsy." This proved a very instructive case and echoed an interest in the study of the ductless glands, raised some months ago by Dr. Andrew's paper on hyperthyroidism. The patient had seemed healthy until in the second year when he had received an injury by a fall. The thickened cheeks, heavy submaxillary, large protruding tongue, potted belly and peculiar facial expressions, made up the appearance of the little unfortunate. Family history good, except one ancestor had been an epileptic. Dr. Rodman, in addressing the society, reviewed the relative functions of the thymus and thyroid glands. He emphasized their different periods of development and the probable purpose of each as designed by nature for the animal economy. Drs. Terry, Ament, Stevenson, Andrews and Madry took part in the discussion. The general trend of opinion seemed inclined to regard the patient as a sufferer from myxedema, that the fault was with the thyroid rather than the thymus gland; some, however, supported Dr. Rodman's diagnosis, calling attention to the fact that the tardy closing of the fontanelles, and the other markings, together with the Jacksonian epilepsy, could better be accounted for on a theory respecting an injured pituitary body and a thymus gland, than heredity and a thyroid gland; and this theory had been borne out by Dr. Rodman's experience in the treatment of the case. The patient had improved under the one and developed symptoms of hyperthyroidism under the other. The "medical iconoclast" appeared in this discussion long enough to hit heredity another lick.

Dr. Terry presented an interesting paper on "Some Cases of Impossible Diagnosis in Abdominal Surgery." Owing to the 20 minute rule, the doctor had left out a number of very interesting cases that he had intended using as illustrations, but he was given an opportunity in his closing discussion to refer to some of these. It was shown in this

paper, and the discussion that followed, how often are the signs and symptoms out of proportion to the morbid conditions found on opening the abdominal cavity. The doctor's paper was one more piece of solid evidence of the fact that one does not always know what he will find on opening an abdominal cavity.—A. H. MADRY, M. D., Reporter pro tem.

MARION COUNTY MEDICAL SOCIETY.

The Marion County Medical Society met in regular session Friday evening, March 4th, 1910. The meeting was one of the best attended for several months. Dr. Frank R. Fry, of St. Louis, was present. A paper by Dr. J. N. Coons on "Some of the Ills of the Aged, and How to Treat Them," was read by the secretary. The local executive committee who has in charge the arrangements for the coming State meeting, reported suitable quarters had been engaged for the general sessions, as well as for the various sections and also exhibit space.

A motion prevailed that the local press receive report of the monthly meetings of the society through the official reporter.—R. M. WINN, M. D., Reporter.

MISSISSIPPI COUNTY MEDICAL SOCIETY.

Mississippi County Medical Society met with Drs. Davis and Hodges, in East Prairie, Mo., March 7th, 1910.

Dr. J. S. Davis reported a case of a child taken with chill, fever, rapid pulse and respiration, slight cough and wild delirium. No evidence from auscultation and percussion could be found of any pneumonia. After a general discussion and inquiry the society concluded that this was a case of grippe infection producing cerebral hyperemia and that there was probably a central area of lung involved that was obscured from ordinary examination. Other similar cases were reported and discussed.

Drs. Wallace and Martin reported an interesting case of gun-shot wound in a child 4 years old. The bullet—a 22 calibre target rifle—entered the right molar bone, ranged downward and backward, presenting near the surface in sterno-cleido-mastoid muscle about two inches below the mastoid process. Child developed paralysis six hours after being wounded, a large hematoma formed under and around the muscles and child died on the third day.

Dr. W. S. Love read a paper on "Lobar Pneumonia," which was indorsed by the society and recommended for publication in the JOURNAL. Dr. F. S. Vernon will read a paper at the April meeting on "The Management of Pregnancy, with Especial Reference to the Prevention of Convulsions." Society adjourned to meet April 4th at Charleston.—J. C. BOONE, M. D., Secretary.

MONITEAU COUNTY MEDICAL SOCIETY.

The Moniteau County Medical Society met in regular quarterly session at Tipton, March 10, 1910. The meeting was well attended, the following members being present: Drs. J. H. Lang, J. B. Stewart, J. B.

Norman, Drs. Frye, Elliott, H. B. Marsh, L. L. Latham, W. G. Wilson, J. M. Robertson, H. R. Popejoy, W. R. Patterson and H. C. Freudenberger. Dr. Osborne was a visiting physician and was elected to membership.

Clinical cases of interest were reported by Dr. Lang and Dr. Patterson.

Dr. Patterson read a paper entitled "Medical Organization." This paper was full of points of vital interest to every practicing physician and received an animated discussion. It called forth the universal commendation of all physicians present.

This was no doubt as profitable a meeting as Moniteau County has ever held and it was especially characterized by the enthusiasm and good fellowship of all in attendance.

The secretary was instructed to arrange for a combined meeting of Moniteau, Cooper and Morgan County Medical Societies at an early day in July.—H. C. FREUNDENBERGER, M. D., Secretary.

MONTGOMERY COUNTY MEDICAL SOCIETY.

The regular bi-monthly meeting of the Montgomery County Medical Society was held at the court house in Montgomery City at 1 p. m. on February 8. It having been decided at the December meeting to make this a public meeting and notice as such published in the county papers, quite a nice representation of the town people were present. After calling the meeting to order, the president, Dr. C. A. Revelle, made a short talk stating the purpose of the meeting and introducing Dr. O. H. Brown, who was present by invitation and who delivered a very interesting address on Tuberculosis, Its Treatment and Prophylaxis as Practiced at the State Sanatorium at Mt. Vernon. As this address was intended particularly for the benefit of the laity as a means of popular education, Dr. Brown avoided as far as practicable the use of technical terms and we believe his talk will be the means of creating a greater interest and a desire for more knowledge among the laity along the line of prevention of infection from this disease. At the conclusion of the address various points were discussed by members of the society, and a vote of thanks tendered Dr. Brown.

Taking up the business part of the program Dr. J. B. Holcomb, of New Florence, was elected a member of the society. Under the head of unfinished business Dr. David Nowlin, Dr. J. L. Jones and Dr. S. S. Cox were elected to serve as censors for 1910. Dr. C. A. Revelle was elected president, G. W. Muns, vice-president, J. L. Jones, treasurer, and W. M. Wheeler, secretary. Dr. Revelle was elected delegate of the society at the annual meeting of the state society to be held in Hannibal on May 3, 4 and 5, and Dr. Wheeler was chosen as alternate.

Dr. Revelle promised to prepare a paper on Enuresis, to be read at the state meeting. No further business appearing the society adjourned to meet again on April 11, at the same place.—W. M. WHEELER, M. D., Secretary.

PLATTE COUNTY MEDICAL SOCIETY.

The Platte County Medical Society met in Weston, February 16th, with a good attendance.

Dr. C. E. Benham read a paper on "The Typhoid Epidemic at Parkville," which was highly appreciated. Dr. J. W. Schultz read a paper on "My Experience in La Grippe." This paper also contained many useful suggestions and showed careful preparation. Both papers were thoroughly discussed by the members present.

The program for the next meeting consists of the following papers: The Use of Hyoscine, Morphine and Cactin in Obstetrics, by Dr. W. D. Swaney, Linkville. Discussion opened by Dr. E. R. Hull, Camden Point. Treatment of Abortion, by Dr. A. S. J. Smith, Dearborn. Discussion opened by Dr. Abe Shafer, Edgerton. Race Suicide—What the Doctor Can Do to Prevent It, by Dr. H. M. Clark, Platte City. Discussion opened by Dr. H. H. Patterson, Edgerton.

MEETING OF MARCH 2D.

Platte County Medical Society held its regular meeting at Platte City, March 2d. Present: Drs. A. S. J. Smith, M. H. Moore, F. M. Shafer, W. D. Swaney, G. C. Coffey, Spence Redman, H. M. Clark, E. R. Hull. Dr. Harrell, of Kentucky, was a welcome visitor and gave a talk that was full of inspiration for the members and was highly appreciated. The following papers were read and discussed:

"The Use of Hyoscine-Morphin-Cactin Comp. in Obstetrics," by Dr. W. D. Swaney.

"The Treatment of Abortion," by A. S. J. Smith.

These papers were well prepared and brought out a very interesting discussion. The paper by Dr. H. M. Clark on "Race Suicide," was postponed until the next meeting on account of the late hour.

The next meeting will be held on April 6th.—E. R. HULL, M. D., Secretary.

RANDOLPH COUNTY MEDICAL SOCIETY.

Randolph County Medical Society, at its meeting December 30th, 1909, elected the following officers for the ensuing year: President, Dr. D. A. Barnhart, Huntsville; vice-president, Dr. G. A. Johnson, Moberly; secretary and treasurer, Dr. L. A. Bazan, Clark; delegate to State Medical Association, Dr. C. B. Clapp, Moberly; alternate, Dr. F. L. McCormick, Darksville; censor committee, Drs. G. O. Cuppaidge, T. D. Mangus, C. K. Dutton, for one, two and three years, respectively.

After election the subject of appendicitis was presented by Dr. C. B. Clapp and thoroughly discussed by the members present. Not having any more papers or clinics, the society adjourned until next regular meeting, February 24th.

MEETING OF FEBRUARY 24TH.

Dr. L. A. Bazan gave a history of a rather unusual case of chronic hypertrophy of the liver in a man of 78 years of age, non-alcoholic, non-syphilitic and non-tubercular.

Discussion ensued and Dr. Bazan, in closing, thanked the society for the interest they took in the case.

The society then adjourned till the next regular meeting, March 31st, 1910.—L. A. BAZAN, M. D., Secretary.

ST. LOUIS COUNTY MEDICAL SOCIETY.

The St. Louis County Medical Society met in Webster, January 12, 1910.

Dr. J. H. Armstrong read a paper on Modern Surgery, in which he covered many points showing the necessity of assisting nature by removal or repair of the numerous apparently innocent defects found in our daily practice. His paper was broad and comprehensive.

The report of the secretary for the year ending December 31, 1909, was as follows: Number of regular meetings held, 9; total attendance, 110; average attendance, 12; greatest number at any meeting, 18; least number at any meeting, 7; scientific papers read, 7; pathological specimens presented, 2; number of members paid in full, 35; number of members unpaid, 1; number of members received, 4; number of members removed from county, 1; none of the members died or resigned.

FEBRUARY MEETING.

The society met at Webster February 9, 1910.

Dr. M. A. Goldstein, of St. Louis, gave a talk on the Ear, Nose and Throat Work of the general practitioner.—P. M. BROSSARD, M. D., Secretary.

BOOK REVIEWS

W. B. Saunders Company, the medical publishers of Philadelphia and London, have just issued a new edition—the thirteenth—of their handsome illustrated catalogue. It contains some twenty new books and new editions, and besides numerous black-and-white illustrations, there are two color cuts of special value. We strongly advise every physician to obtain a copy—sent for the asking. It will prove a ready guide to good medical books—books that we all need in our daily work.

PROGRESSIVE MEDICINE. March, 1910. A quarterly digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College, Philadelphia. Assisted by H. R. M. Landis, M. D., Assistant Physician to the Out-Patient Medical Department of the Jefferson Medical College Hospital. Lea & Febiger: Philadelphia and New York. $6.00 per annum.

This volume of Progressive Medicine contains articles on the following subjects: Surgery of the Head, Neck, and Thorax, by Charles H. Frazier, M. D., Infectious Diseases, including Acute Rheumatism, Croupous Pneumonia and Influenza, by John Ruhrah, M. D., The Diseases of Children, by Floyd M. Crandal, M. D., Rhinology and Laryngology, by D. Braden Kyle, M. D., Otology, by Arthur B. Duel, M. D. The book maintains its high standard of excellence, and the practitioner will find in this number all the latest and most improved methods of dealing with the conditions treated of.